



The flagship of the CANDU industry, the **Point Lepreau Generating Station**, is undergoing one of the most important upgrades in the history of CANDU technology. AECL is helping to make it happen. [More>>](#)

We've got good news and lots of it! **A series of announcements** in the past month promises great growth for AECL, its employees and the Canadian nuclear industry. [A closer look>>](#)

AECL seeks to renew its **Chalk River Laboratories operating licence** with the Canadian Nuclear Safety Commission. [Read more >>](#)

The Canadian Cancer Society recognizes AECL with a **Community Partner Award** for its excellence in community fundraising. [More>>](#)

Take a look! We've **refreshed our website** to better address the information needs of our audiences. [Check it out>>](#)

The Canadian Nuclear Industry **honours two AECL research and development experts** for their outstanding contribution to the Canadian nuclear industry. [More>>](#)

AECL participants and women from around the world share their knowledge during the global **Women in Nuclear** conference. [Read more>>](#)



**Suggestions?**  
[Tell us what you think of our newsletter.](#)

### Did You Know?

AECL's CANDU 6 reactors (700-megawatt class) are operated in five countries on four continents by six different utility customers. Three of the CANDU 6 units rank in the world's top 10 reactors by lifetime performance.

### News Room

[Check out what people are saying about AECL!](#)

### Link

[CANDU Canada](#): Canada's nuclear energy source. This website answers your questions about CANDU nuclear power and gives you the opportunity to find out more about the future of Ontario's energy supply.

Received this email from a colleague?

Subscribe to receive your own copy now >>



## Flagship CANDU 6 Undergoes Full Refurbishment

The flagship of the CANDU industry, the Point Lepreau Generating Station, is undergoing one of the most important upgrades in the history of CANDU technology.

As the first CANDU 6 unit to be licensed for operation and to begin commercial operation - entering service in 1983 - it will now become the first CANDU 6 to undergo full refurbishment.



And Atomic Energy of Canada Limited (AECL), its original designer 25 years ago, is once again playing a primary role, as general contractor, and will be ensuring the successful completion of the life-extension project.

"Clean, reliable, affordable power from Point Lepreau Generating Station is crucial to the continued economic well being of the people of New Brunswick," said Robert Van Adel, AECL President and CEO. "Our employees, resources and proven track record will ensure this project is completed successfully and that the Point Lepreau reactor continues producing power efficiently for another 25 to 30 years."

New Brunswick Power, the only nuclear utility in Atlantic Canada, awarded AECL fixed price/firm schedule contracts in July 2005. As general contractor, AECL is managing and executing all of the fieldwork and is responsible for three aspects of the overall project:

- Retubing - in which all 380 fuel channels and associated feeder tubes will be removed and replaced
- Construction of a Solid Waste Management Facility at the site to store removed radioactive material such as the pressure tubes from the reactor core and,
- Refurbishment, where aging components and outdated technology will be removed and upgraded

Plant owner New Brunswick Power is responsible for other aspects of the project including: normal shut down of plant for refurbishment outage; removal of fuel; heavy water; normal maintenance during outage; providing new fuel; reloading heavy water and returning the station to service. The project is to be completed in 2009.

The Point Lepreau Generating Station has a net capacity of 635-megawatts and supplies about 30 per cent of the energy consumed in the province.

The refurbishment project is well on its way, with activities proceeding on time and on budget. There are currently construction activities in three areas of the waste site:



*A reactor mock-up is being readied by AECL to play a vital role in extending the life of the Point Lepreau Generating Station.*

- Phase I – low and intermediate waste extension
- Phase II – dry fuel canister extension
- Phase III – retube waste structures

AECL recently celebrated a project milestone with the completion of groundwork preparation for the waste management facility and first pour of cement for the foundation of the concrete containers for waste.

David Scott, AECL's General Manager, CANDU 6 Refurbishments and Project Director for the Point Lepreau Refurbishment, said that AECL's 25-year experience of actively supporting the operation of the station has given the company an added advantage.



*Erecting circular tie-less formwork for the retube canister walls of the waste management facility.*

"Because of our knowledge and strong working relationship with Point Lepreau staff and New Brunswick Power, we have had a very smooth and seamless experience in ramping up for the project," David said.

"AECL has maintained its long-standing commitment to hire and work closely with qualified local labour and suppliers," he said. "A series of New Brunswick contracts relating to tool manufacturing and construction services have also been awarded."

AECL currently has 31 full-time staff. Of those, 27 are New Brunswick residents and 24 were recruited locally. In addition to seasoned professionals, the expanded team includes seven recent graduates from the University of New Brunswick.

The project will significantly benefit the province long after the project's completion, David added.

"There are 10 CANDU 6 units in the world and this is the first to undergo such a significant overhaul," he said. "In time, more CANDUs will require similar overhauls and the expertise gained here will inevitably be utilized for similar projects."

[Top](#)

## **Exciting News Positions AECL For Domestic and International Growth**

The past month has been an exhilarating one for AECL, its employees and the Canadian nuclear industry with the release of a series of announcements that promise great growth potential for AECL and long-term solutions for legacy issues.

In this time, the [Ontario government set out its plan](#) to meet the province's electricity needs and committed to maintain the current portion of nuclear energy in its long-term electricity supply mix plan. Team CANDU, an initiative made up of five of the world's leading nuclear technology and



engineering companies, including AECL, is positioned to support the government in its new build requirements by offering a turnkey, fixed price solution using Canadian-made CANDU technology.

On the national level, AECL is moving forward on a path to achieve international best practices for managing Canada's decommissioning and waste management obligations for its nuclear facilities following the recent [commitment of \\$520 million over the next five years](#) by the federal government.

Internationally, AECL was recently awarded a [major retube contract for the Wolsong 1](#) CANDU 6 nuclear reactor in Korea. This marked AECL's first international retube project and its third major contract awarded in the past 10 months.

And, finally, supporting our international growth and position as a long-term full service provider, a [recently signed Memorandum of Understanding](#) between Argentina and AECL sets out the framework for a program of substantially enhanced nuclear co-operation with resulting commercial opportunities for AECL and Canada.



*Wolsong 1 CANDU 6*

[Top](#)

## **AECL Seeks Renewal of Chalk River Laboratories Licence**

AECL recently appeared before the [Canadian Nuclear Safety Commission \(CNSC\)](#) for the second part of a [two-day hearing](#) on the renewal of AECL's operating licence for its Chalk River Laboratories.

The current licence expires on July 31, 2006 and AECL has applied for a 63-month renewal, almost double the existing licence. CNSC staff has recommended that the Commission accept the proposed licence period.

"We believe that we have operated Chalk River safely during the current license period with due regard for the environment, security and Canada's international obligations," said Brian McGee, AECL Vice-President, Nuclear Laboratories Business Unit. "We are committed to safe operation throughout the proposed license period and will continue to strive to become a model of safety culture excellence. A strong safety culture is central to our goal of overall operational excellence, and we will not be satisfied with anything less."



Chalk River is Canada's national nuclear laboratory. Since 1944, it has been the home of research and development for the CANDU reactor and a centre of excellence in physics, metallurgy, chemistry, biology and engineering. Much pioneering work has been performed at Chalk River, including fundamental reactor physics research and development of reactor simulation computer programs, chemistry, fuels, materials and engineered systems for the CANDU reactor.

*AECL's Environmental Protection Program is the company's system for developing, implementing and continually improving environmental management. The program encompasses all AECL sites and activities at those sites, within Canada.*

Onsite, the National Research Council performs fundamental materials research using neutrons generated by AECL's National Research Universal (NRU) reactor. The technology developed here has been put to good use in radio-medicine applications. The NRU continues to produce the majority of the world's medical isotopes used in both the diagnosis and treatment of life-threatening diseases.

Environmental scientists and a rigorous [Environmental Protection Program](#) ensure that the impact of operations at the Chalk River site are negligible on the health and well-being of employees, the public and on the environment.

The first hearing day was held April 26, 2006, during which AECL made a presentation in support of its application and CNSC staff summarized their assessment of AECL's performance during the licence period. The second hearing day of a licence renewal is primarily held for interveners to express their views on the application. During AECL's second hearing day, 37 parties expressed their [support](#) and/or concerns regarding the renewal application.

The Commissioners are to announce their decision prior to July 31, 2006, following deliberation of AECL's application.

[Top](#)



## AECL Receives Cancer Society's Community Partner Award

The Canadian Cancer Society has awarded Atomic Energy of Canada Limited (AECL) a Community Partner Award for its excellence in community fundraising.

The award was recently presented to AECL by the Society's Renfrew County unit as part of its *Relay For Life* ceremony in Petawawa, Ontario. The award recognizes excellence in individuals or groups in community fundraising who strive to involve their members and/or the community in their efforts to raise funds for cancer research and the Society's programs and services.



*AECL Relay for Life participants plant a Survivor Tree in honour of cancer survivors.*

AECL has been intimately involved with the *Relay* since its inception seven years ago through

sponsorships, event organization and promotion, staff participation and generous pledges and donations from employees. AECL was also the sponsor of this year's Survivor Tree, planted in honour of cancer survivors.

Kathy Kennedy, the Society's Renfrew County Unit Manager, said AECL has been a long time supporter and friend of the *Relay* event.

"We could not enjoy this kind of success without AECL's continued involvement," said Ms Kennedy, whose unit raised \$275,000 through the *Relay* and attracted approximately 1,400 participants, 215 of which were cancer survivors.

"We look forward to their support next year and into the future. AECL supports the event in many ways, including the work of staff members who freely give of their time to help plan the event. We are truly grateful to all the employees of AECL who have supported us as our event has evolved."

The Society's *Relay For Life* is an overnight, non-competitive event that celebrates cancer survivors and those battling the disease, and honours those who have lost their fight. Monies raised are put toward research on all types of cancer, support services for people living with cancer and their families, and the development of comprehensive, credible cancer information for the public.

Brian McGee, AECL Vice President, Nuclear Laboratories in Chalk River, said AECL and its staff are committed to developing and maintaining solid, long-term relationships with all of its stakeholders, including the [communities](#) in which they work and live.

"Our employees want to make a difference in the world around them, as evidenced by this effort," said Brian. "Collectively as a corporation, and individually at our various sites,

our employees work to support and participate in a range of charitable and community fundraisers to help build a strong community and a healthy society."

[Top](#)

## A new look for [www.aecl.ca](http://www.aecl.ca): Revamped Website Delivers More

We are very pleased to introduce to you our newly re-minted external website, at [www.aecl.ca](http://www.aecl.ca).

Fresh onto the Internet, we believe we have created a much more user-friendly and vibrant site that highlights current news and information, serves as a resource for all of our stakeholders and our communities, and presents information about our business activities and the industry in an open, simple and easy to navigate format.



Our refreshed site contains a range of information that features, among other things, our:

- Enhanced nuclear technology – including CANDU 6 and ACR-1000
- Cooperative initiatives, including Team CANDU
- Dynamic commercial business
- Major projects
- Environment-enhancing research and development
- Life enhancing nuclear medical isotope production
- Regulatory and licensing activities and,
- Commitment to safety, the environment and the communities in which we live

All of which we hope will bring you, the user, back, again and again.

We encourage you to browse our site and save it as one of your "favourites" for future visits!

We would also be pleased to hear from you as to your impression of our site. Please send us your thoughts at [info@aecl.ca](mailto:info@aecl.ca)

[Top](#)

## AECL R&D Experts Recognized For Excellence

The [Canadian Nuclear Society](#) has recognized two AECL employees for their outstanding contribution to the Canadian nuclear industry.

Ian Hastings, Reactor Development Operations Director, and Robert (Bob) Tapping, Director, Components and Systems, both with AECL's Technology Business Unit, were each recently presented with the prestigious Outstanding Contribution Award during a ceremony at the Society's 27<sup>th</sup> Annual Conference.

David Torgerson, AECL Senior Vice President and Chief Technology Officer, said the pair have significantly contributed to supporting and advancing CANDU technology and expertise, and to assuring customer confidence in CANDU technology.

"Ian and Bob have contributed significantly throughout their careers to AECL's ongoing commitment to research and development excellence," David said. "We often speak of our continuing drive to have the best people working for AECL. Ian and Bob epitomize this goal."

---

### **Ian Hastings**

From the time he joined AECL in 1968, Ian has been a key leader and major contributor to an extensive body of work relating to the basic properties and performance of CANDU fuel. This was accomplished by a combination of successful in-reactor testing and a sound understanding and application of scientific theory.



The body of work led by Ian is a large part of the foundation for understanding and modeling CANDU fuel performance used throughout the CANDU industry, and has contributed significantly to the international understanding of UO<sub>2</sub> fuel performance.

Ian was also instrumental in the development of new and novel CANDU fuels. He was an original member of the CANFLEX fuel development team, designed and tested numerous other fuel types to improve fuel performance and reactor margins, and made significant contributions to the advancement of research reactor fuels. He also extended his expertise to fusion fuel studies as part of the Canadian contribution to fusion research.

### **Bob Tapping**

Bob is an internationally recognized leader in water chemistry, metallurgy and component performance. A 27-year veteran of AECL, his multidisciplinary research is innovative, spanning all reactor systems and components, particularly heat exchangers, steam generators, fuel channels and feeders. A pioneer in the highly competitive research and development field of materials degradation, Bob has a unique ability to apply mechanistic understanding to chemistry and materials-degradation issues. He has been particularly effective in applying AECL's knowledge to support reliable reactor operations.



Bob has also been instrumental in the development and implementation of the cutting-edge SMART reactor technology, which allows reactor engineers to anticipate and address issues proactively, resulting in improved capacity factors.

Bob was selected in 2004 by the U.S. Nuclear Regulatory Commission to serve on an eight-member international panel to identify reactor components that could degrade in the future and provide input for developing proactive management programs.

[Top](#)



## Conference Highlights Global Impact of Women in Nuclear

The opportunity to attend an international nuclear conference for women and network with colleagues from around the world has left an indelible impression on AECL participants and their global counterparts.

The Women in Nuclear (WiN) conference, held recently in Waterloo, Ontario, offered more than 30 AECL participants a rare occasion to learn and share their knowledge and experience with 350 of their peers from 37 countries.

"The conference gave participants an opportunity to see the industry from a different perspective – by highlighting women who are making a difference to leadership and the advancement of nuclear power and radiation technology," said Beth Medhurst, AECL Senior Vice President of Human Resources and host of an AECL-sponsored workshop that saw 31 international delegates tour AECL's technical laboratory in Mississauga.



*Jonathan Tarrant, AECL Metrologist and Quality Control Inspector, demonstrates the Coordinate Measuring Machine (CMM) to WiN delegates during a tour of AECL's technical laboratory in Mississauga. The CMM is a highly accurate system for measuring the size, shape and features of a subject work piece.*

"The learning offered was remarkable – on both the history and future of nuclear and specifically the participation and leadership of women in all aspects of nuclear: technology, communications and social responsibility, to name a few. It was also a unique opportunity to make and build relationships with other women - to learn and share and create avenues for future communications."

[WiN](#) is a worldwide association of women working professionally in the fields of nuclear energy and the application of radiation. The principal objective of WiN is to emphasize and support the role that women can and do have in addressing the general public concern about nuclear energy and the application of radiation and nuclear technology.



*Tracy Kemp, Radiation Surveyor, Chalk River*

While many of the members of WiN are employed in the nuclear energy sector, others work in areas where nuclear and radiation technologies are utilized. Globally, the membership includes women working in medicine and health care, in regulatory authorities, in industry and as independent researchers at universities.

Members of WiN all have one thing in common: they want the general public to have a better understanding of nuclear and radiation issues. WiN is also open to men who support the organization's goals.

The inspiring three-day conference, the first to be held in Canada, was entitled *Positioning for Growth* and offered sessions on leadership, safety culture, policies, communications, public opinion and nuclear advancements.

In addition to its delegates, AECL was represented by AECL Chief Engineer Basma Shalaby, who participated in two panel discussions - *4th Generation Nuclear - What the Future Might Look Like* and *Nuclear Facility Life Extension and Rehabilitation: The Canadian Experience*.

[Top](#)

## Testimonials

Testimonials made during the second part of a Canadian Nuclear Safety Commission [hearing on the renewal](#) of AECL's operating licence for its Chalk River Laboratories.

"We are confident that AECL takes their role very seriously in ensuring that public safety and the environment are not compromised and we know that they have the experience and ability to deal with issues as they may occur from time to time. However, what is truly relevant is that they understand they are accountable to their surrounding communities and they will not put business before safety."

"... they are open, transparent, concerned. They continue to provide nuclear medicine to the world. Its international reputation for clarity; excellent business acumen makes AECL truly ambassadors for Canada."

**Mayor Ed Jacyno, City of Pembroke, Ontario**

---

"Nuclear medicine procedures are common. We perform about four and half thousand procedures every day in Canada; something over one million procedures a year in this country, about 12 million procedures in North America and between 20 and 25 million procedures every year worldwide. So this involves a very large number of patients.

In Canada, approximately 90 per cent of all diagnostic nuclear medicine procedures require molybdenum-99 from NRU (National Research Universal). You could say that almost all nuclear medicine treatments performed in Canada use NRU products. This is absolutely critical to the care of my patients and to the patients of my clinical colleagues."

"...the contribution of NRU to the practice of medicine is enormous and, indeed, without the contribution of NRU, nuclear medicine on this continent certainly would not exist."

**Dr. Alexander McEwan, Past President of the Canadian Society of Nuclear  
Medicine and President Elect of the Society of Nuclear Medicine  
in the United States**

---

"...we are very confident that AECL is a good partner in our community in the County of Renfrew. They have been open and honest with us. They are seeking out additional opportunities to meet our needs as political and elected officials to make sure that our communities are safe and they look for opportunities as well to help us with our economic development."

**Mayor Ann Aikens, County of Renfrew, Ontario**

[Top](#)