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Safe, sound and a top performer. After consistently high lifetime capacity levels, the Qinshan Unit 1 nuclear reactor achieves **top marks** in its first five-year in-service reactor building structural integrity and containment tests. *Find out how* (page 2)

Just short of its 50th birthday, AECL's **National Research Universal** reactor safely breaks a medical isotope production record to help meet supply shortfall, enabling more than a million additional diagnostic scans for patients around the world. *Take a closer look* (page 3)

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Sharing our story. Increased public interest drives demand for educational presentations on nuclear energy and CANDU technology - leaving AECL's tireless team of community orators on the move! *Learn more about it* (page 4)

Setting standards: AECL's Shami Dua receives prestigious Canadian Standards Association Award of Merit for **leadership and expertise** in advancing nuclear and quality management standards. *Read all about it* (page 5)

Did You Know?

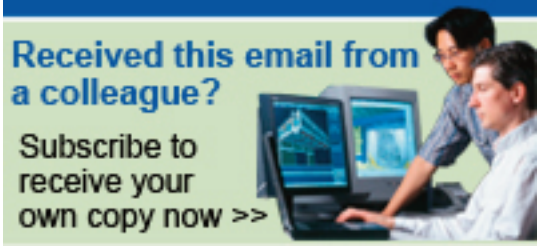
Every twin-reactor ACR-1000 nuclear plant can generate enough power to meet the daily needs of up to two million people with no emissions of nitrogen oxides, sulphur oxides, toxic heavy metals, aerosols, ozone, or other pollutants.

News Room

Ontario government nuclear technology review will confirm CANDU is the right choice for Ontario. (page 6)

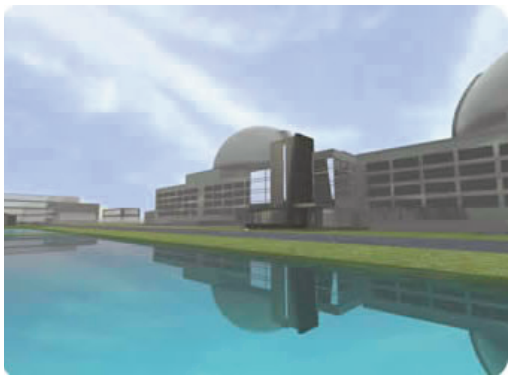
Link

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.



AECL Submits ACR-1000 for UK Pre-Licensing

AECL has formally submitted its Advanced CANDU Reactor® (ACR-1000®) for pre-licensing approval as part of the United Kingdom's Generic Design Assessment (GDA) process.



"The UK energy review is moving forward and we believe that nuclear power – specifically our ACR-1000 technology - can play a significant role in assisting the UK in cutting harmful emissions as per their climate change objectives, while meeting licensing requirements and offering competitive power to UK utilities," said Jerry Hopwood, AECL Vice President of Reactor Development.

"With our record of product and project delivery – and the strength of our ACR-1000 design - we are confident that CANDU can help reinvigorate the UK's nuclear program."

AECL has received support from British Energy and indications of support from potential utilities and investors in the UK, said Jerry.

AECL also recently held a joint seminar with the UK's largest union, Unite (Amicus Section), at which AECL indicated that, working with UK organizations such as Amicus, it would be able to achieve 70 per cent local content if it is awarded the contract to build a new generation of nuclear reactors in the UK.

In its Energy White Paper, the UK government concluded that the UK needs a mixed energy portfolio with a focus on low carbon options. One option being considered is the use of new build nuclear power to replace existing aging nuclear power plants. The Nuclear Consultation process has been put in place to enable the UK government to confirm whether the nuclear build option is in the overall public interest.

AECL's ACR-1000 is currently being considered as the technology of choice for several Canadian markets. Built on the proven success of AECL's CANDU nuclear technology, the ACR-1000 is a Gen III+, 1200 MWe class nuclear power plant with evolutionary improvements in safety, performance and reliability.

For the past 10 years, AECL has been continuously building new nuclear reactors and has surpassed all major reactor vendors in completing six reactors on budget and on or ahead of schedule.

AECL's new Cernavoda Unit 2 CANDU 6 nuclear power plant, owned by Romania's nuclear public utility Societatea Nationala Nuclearelectrica SA, sustained a fission reaction for the first time in early May of this year. CANDU 6 power plants are operated in five countries around the world by seven different utilities, and have consistently achieved outstanding safety and performance track records.

Qinshan Unit 1: Safe, Sound and the Best Reactor in China

Tests set new record for CANDU 6 reactors

The Qinshan Unit 1 nuclear reactor has set yet another record for CANDU 6 reactors. After operating for five years with a lifetime capacity factor of 87 per cent, and more recently running for 463 days without stop, Qinshan Unit 1 recently achieved great results in its first five-year in-service reactor building structural integrity and containment leak rate tests.

The containment leak rate test result was 99.798 per cent (or a very low leak rate of 0.202 per cent per day) of the reactor building volume per day – the best in-service containment leak rate of all operating CANDU 6 plants. The containment leak rate, witnessed by the Chinese regulator, was verified by introducing a known leakage from the reactor building.

"This record low containment leak rate is evidence of the excellent design and construction quality control performed by AECL and its Chinese contractors, as well the high operations and maintenance standards maintained by reactor owner Third Qinshan Nuclear Power Company," said John Sharp, AECL Qinshan Technical Advisor/Site Manager. "The 87 per cent lifetime capacity factor also ranks Qinshan Unit 1 as the best reactor in China."

As part of the regulator's safety requirements, the CANDU 6 reactor building structural integrity and containment leak rate tests are performed every five years. These tests were first performed at the pre-operational Qinshan 1 in May 2002. At that time, the containment leak rate test result was 99.790 per cent (or a leak rate of 0.21 per cent per day), the best result for all CANDU 6 reactor pre-operational containment leak rate tests.

The requirement for the containment leak rate is to maintain more than 99.5 per cent of the reactor building volume per day (or a maximum leak rate of 0.5 per cent per day). The structural integrity requirement is that response to pressure is within the theoretical prediction and in the elastic range without causing any structural distress.

The CANDU 6 reactor building containment structure consists of a base slab, perimeter wall, ring beam and the upper dome. The containment structure is pre-stressed in different directions and the interior surfaces of the containment structure are lined with four coats of containment quality epoxy liner.

The containment structure is a safety system that performs the following functions:

- Provides structural integrity during all specified normal and accident load conditions, such a design based earthquake or a loss of coolant accident, as imposed on the reactor building
- Provides biological shielding to the staff outside of the reactor building, and the public at large during operating and accident conditions
- Provides containment tightness for the protection of the public and the environment, such that a leak would not exceed the permitted level during specified accident events inside the reactor building with the potential to release radionuclides

The Qinshan Unit 1 outage began in mid-April to allow system and structural preparation for the containment and structural integrity tests as well as other maintenance activities. The tests involved more than 200 people and a number of external service companies.

Nearing 50, National Research Universal Still Setting Records

Isotope production boost meets global medical demand

AECL's National Research Universal (NRU) reactor – just short of its 50th anniversary in November - has broken a record that has stood for more than a decade.

When a short-term production shortfall occurred in the worldwide market for medical isotopes, AECL, upon concluding it could be managed safely, responded by ramping up production to a new high. In May, NRU set a new six-day record for the production of Molybdenum-99 (Moly-99), a medical isotope widely used for diagnosing heart diseases.

This extra effort, achieved safely and efficiently, allowed for more than a million additional diagnostic scans for patients from around the world.

"Recently, there had been circumstances in the global Moly-99 supply chain that gave us an opportunity to make up for a shortfall in the market," said Mike Thomas, MDS Nordion Senior Vice-President, Finance and Operations. "The additional quantities of Moly-99 that were collectively supplied, processed and shipped by AECL and MDS Nordion represent a significant achievement that we wish to acknowledge."

Ken McLennan, AECL Director of NRU Operations, said that the ongoing safe operation of NRU and safety of its employees is of primary importance to AECL.

"Safety always comes first before production considerations," Ken said. "This production boost was made only after it was determined it could be achieved safely, without impact on our employees or the environment. As a result of good work practices and our safety first culture, this record was achieved 'event free.'"

With its inception in 1957, the NRU reactor was a landmark achievement in Canadian science and technology, "and now, almost half a century later, it is still as important a resource as ever," he added.

"The NRU reactor produces more than half the world's market demand, and is showing no signs of slowing down," said Ken.

NRU is one of the world's most versatile research reactors. Recognized for its use in materials and neutron beam research, it is also responsible for the production of radioisotopes such as Moly-99, as noted, Cobalt-60, Xenon-133, Iodine-131, Iodine-125, Carbon-14 and Iridium-192.

NRU leads the world in the production of these life-saving medical isotopes used by nuclear medicine practitioners for diagnostic imaging and various forms of therapy, primarily to destroy cancer.

To ensure a long-term secure supply of isotopes, AECL is in the process of commissioning the MAPLE 1 and MAPLE 2 reactors and a new processing facility at its Chalk River site for further isotope supply to MDS Nordion. Unlike other reactors, the

MAPLE reactors will be dedicated to the production of medical isotopes. MAPLE 1 and the processing facility are expected to be in service by October 2008; MAPLE 2 is expected to be in service by October 2009.

Owned and operated by AECL, these reactors will be capable of supplying the entire global demand for Moly-99, Iodine-131, Iodine-125 and Xenon-133 for decades to come.

AECL President and CEO to Retire

Mr. Robert Van Adel, President and Chief Executive Officer, has decided to retire from the company as of November 2, 2007.

"The Board of Directors is extremely pleased with AECL's accomplishments under Bob's leadership and we respect his decision to retire," stated Chair of AECL's Board of Directors Mr. Michael C. Burns. "Over the last six years, he has transformed the company into a robust, profitable commercial business on track to lead the global nuclear renaissance and we thank Bob for his tireless work in preparing the company for an exciting future."

In announcing his departure, Mr. Van Adel noted, "I am very satisfied that I've achieved what I had set out to do and the timing was right on a personal level. This will allow me to spend more time with my family and to focus on other commitments. AECL is well positioned to meet the anticipated demand for new nuclear around the world. I'm pleased and confident that we have the right strategies, systems, expertise and people to deliver."

Green Energy Promoted Through AECL Sponsorship

Students and teachers across New Brunswick will soon have a better understanding of "green energy" technologies that don't produce carbon dioxide, including CANDU nuclear, thanks to a new outreach program sponsored by AECL.

The Science East's Energy Awareness Outreach Program, a series of traveling exhibits and educational workshops, is focused on raising awareness of green energy generating technologies.

The program is being provided as an addition to the science curriculum, and in its first phase is aimed at middle and high school students and teachers across the province.

"Nuclear energy is recognized around the world as a clean, safe and reliable source of electricity production and this program will provide valuable hands-on experience to people of all ages while building a basic understanding for green energy options such as nuclear," said Dave Scott, Director of AECL's Point Lepreau Refurbishment Project.

"This sponsorship provides AECL, as a clean source of nuclear generation, with an excellent opportunity to raise awareness and make a positive impact on the important and challenging issue of protecting the environment."

The program provides an excellent opportunity to raise awareness of global environmental issues and to draw attention to one of the major causes of global warming: carbon dioxide emissions, Dave said.

Each year in Canada, CANDU nuclear power stations avoid the emission of about 90 million tonnes of greenhouse gases that would have been produced from fossil fuel-stations and is equivalent to about 12 per cent of Canada's total greenhouse gas emissions.

Dr. David Desjardins of Science East said, "We are delighted and very grateful to AECL for their generous contribution to this important Energy Awareness Program. Thanks to AECL's support, students and teachers throughout New Brunswick will be able to learn about advanced energy production technologies like nuclear, wind power, geothermal and hydrogen and fuel cells, in addition to learning about the critical importance of energy conservation."

Sharing the CANDU Success Story

Informative Program Offers Perspective on Nuclear

Piqued public interest in nuclear energy and AECL's CANDU® technology is keeping AECL's team of speakers on the move.

In the past year, the company's Speakers' Program has experienced a 50 per cent boost in demand for educational presentations by AECL's team of orators who have addressed elementary and post-secondary students, Girl Guides and even

nutritionists across the country.

The primary goal of the Community Speakers' Program is to reach out to people in local communities, take the time to answer their questions and provide them with factual information about nuclear energy and CANDU technology.

Irene Swedak, of Ontario-based Connecting All Natural Nutritionists (CANN), a networking group for holistic nutritionists, said that clients of member practitioners expect them to be well informed about a plethora of issues affecting one's health, but often, through the media, it is difficult to separate fact from fiction.

CANN is interested in companies, like AECL, that can educate their group beyond their area of expertise, in areas that the public is curious, nervous or skeptical about, Irene said.

"Due to our reliance on electricity as a society in general and our consumption, which is increasing as the population grows, many of us are concerned about the future of power in general: Where will it come from? Who will supply it? How much will it cost? Is it safe? What about waste?" Irene said. "Nuclear power is one of the areas the public is curious and nervous about, thus it was enlightening, and relieving, to have AECL answer these questions for us in a clear, concise manner. The information provided by AECL has widened our knowledge base."

Recent polling conducted by Ipsos-Reid on attitudes toward nuclear energy show a shift in opinion in quantifiable terms. National research shows support for nuclear is at an all-time high, and in Ontario specifically, support has increased a full 15 per cent in the last two years to 63 percent. In addition, 86 per cent of Ontarians have indicated that they prefer Canadian-made CANDU technology to foreign competitors for future nuclear developments.

For more information about the Community Speakers' Program, or to book a speaker for your community organization or child's school, please contact Sonja Galton at speakers@aecl.ca or call us at (905) 823-9040, ext. 6191.

Setting Standards: AECL's Shami Dua Receives Prestigious CSA Award

Long-time AECL employee Shami Dua has been recognized by the Canadian Standards Association (CSA) for his outstanding strategic leadership and expertise in the advancement of nuclear and quality management standards, nationally and internationally.

Daniel Gagnier, Chair of the Board, CSA Group (left) presents AECL's Shami Dua with an Award of Merit.

The prestigious Award of Merit, recently presented to Shami at a special ceremony during the CSA's annual conference in Halifax, Nova Scotia, is bestowed upon individuals who have demonstrated leadership in developing Canadian voluntary standards and who, through technical, administrative or special standards activities, have advanced the purpose of the Canadian Standards Association.

As Director, Corporate Standards and CANDU Products and Services Quality Assurance (QA) at AECL, Shami's work has contributed to improving the standards both in the nuclear and quality management areas administered by CSA.

"Shami is one of the lead Canadian representatives encouraging and promoting harmonization and alignment between standards in the global arena," said AECL peer Ramesh Ghai, who, along with other external experts, nominated Shami for the award.

Shami has worked tirelessly to promote an understanding of Canadian standards in the nuclear sector through his role with the CSA and its Canadian Nuclear Strategic Steering Committee. He is also a member of the CSA's Canadian Advisory Committee, a committee that provides Canadian input to the International Organization for Standardization (ISO) on quality management standards, and sector applications of ISO 9001.

Shami's work to ensure standards are maintained at the global level is also evident through his work with the International Atomic Energy Agency (IAEA). He has been the lead Canadian on IAEA quality management missions to China and Egypt. He has also published a number of papers on standards in nuclear management and contributed extensively to the IAEA safety standards on integrated management system.

Shami said he was humbled by the award and recognized his peers and AECL customers as contributors to his success.

"This award is not for me only. It's for everyone who has supported me," said Shami. "I would not have received this without the team here at AECL."

"I strongly believe that standards are a key component to support the expansion of the nuclear industry," he added. "Future generations will find the standards we have achieved a very valuable tool to meeting the safety and quality of nuclear programs."

Team CANDU Participates in Nuclear Technology Review by Province

Study will Confirm CANDU Nuclear Technology Best Choice for Ontario

Mississauga, 2007 May 31 — Team CANDU is ready to participate in the McKinsey & Company independent review of the nuclear technology options available to the Province and is confident that CANDU technology will provide Ontario with the best nuclear technology option.

"Team CANDU and Ontario's nuclear industry is ready to meet Ontario's clean-air electricity needs on a very competitive basis," said Patrick Lamarre, President and CEO of SNC-Lavalin Nuclear Inc. "We are confident that the independent review will confirm that Team CANDU provides Ontario with the best price, best available technology with the lowest risk to Ontario rate payers and is a 'Made-in-Canada' solution."

Team CANDU partners are ready to put their considerable combined expertise and experience at the disposal of their fellow citizens. For the past 10 years, AECL and its Team CANDU partners have been continuously building new nuclear reactors on budget and on or ahead of schedule surpassing all other reactor vendors. AECL's new Advanced CANDU Reactor - ACR-1000 is currently being considered as the technology of choice for several other Canadian markets.

About Team CANDU

Team CANDU is a joint initiative between five of the world's leading nuclear technology and engineering companies – Atomic Energy of Canada Limited, Babcock & Wilcox Canada, General Electric Canada, Hitachi Canada Ltd., and SNC-Lavalin Nuclear Inc. Together, the Team is a power-house of expertise, resources and experience, offering a guaranteed delivery model for building new nuclear power plants in Ontario.

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About AECL

AECL is a full service nuclear technology company providing services to nuclear utilities around the world. Established in 1952, AECL is the designer and builder of CANDU technology including the CANDU 6, one of the world's top performing reactors.

AECL specializes in a range of advanced nuclear energy products and services that are an important component of clean-air energy programs on four continents. Its 4,300 employees provide research and development support, design and engineering, construction management, specialized technology, refurbishment, waste management and decommissioning in support of CANDU reactor products. More information on AECL and CANDU technology can be found at www.aecl.ca.

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