CANADIAN NUCLEAR WORKERS COUNCIL
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Canadian Nuclear Worker

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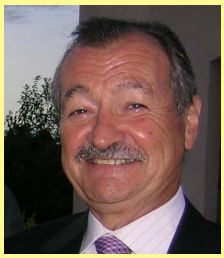
Message from the President

The Time To Talk Nuclear Energy Is Now



September's World Energy Congress in Montreal identified security of supply as the number one issue, followed by environmental protection and climate change. The latter is inextricably linked to the energy sector because it is responsible for 60 per cent of global greenhouse gas [GHG] emissions. Clearly, nuclear energy can play a significant role meeting both challenges but has recently faced a mounting barrage of criticism from green energy advocates.

Nowhere is this more evident than in Ontario. Green energy investment driven increases in electricity prices have conservation, wind and solar generation advocates in the media spotlight. Sensing a potential shift in government support, green energy advocates have countered with aggressive criticisms of the safety, cost and environmental impacts of nuclear energy. An April 2010 Canadian Nuclear Association sponsored survey showed that increased confidence in the nuclear industry was due to the public's belief that the technology was advancing and that they had learned more about the industry. It also showed that support was down in Ontario, which is likely due to the cessation of the Canadian Nuclear Association's outreach program begun in 2005 and dropped in 2008.

First and foremost, our industry should be talking about the benefits of Canada's world-class nuclear technology for ensuring long-term energy security. Even with our vast energy resources of uranium, coal, oil, and natural gas, Canada will not be immune to increased global competition for scarce energy resources. Natural precipitation cycles and climate changes will also mean that our abundant water resources will not always be available when needed. France and Japan see the importance of maintaining a robust nuclear industry and are solidly behind their technology providers as a result.

Canada's nuclear industry is one of the safest in the world. Our CANDU reactor technology is underpinned by a "safety in depth" philosophy that applies to regulatory oversight, design, operations, and to the work force. Decades of safe and reliable performance attest to the success of this philosophy. And stringent regulations ensure that Canada's nuclear industry does not present a security risk.

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Critics invariably point to the high cost of nuclear. Nuclear power plants have high initial capital costs because they are designed and regulated to ensure worker and public safety and to protect the environment. They also provide large base blocks of reliable, GHG emission free electricity for 40 years compared to the twenty-year life-cycles for intermittent wind and solar generation. The safety design features, regulatory oversight and size of a new nuclear power plant mean long-lead times of about 10 years for approvals and construction. This exposes the plant developers to significant cost uncertainties such as those for materials and skilled labour.

The same challenges apply to the refurbishment of existing reactors. In this case, plant operators are refurbishing an existing reactor with new equipment and technologies in a building envelope designed over forty years ago. This has necessitated the development of new tools and techniques not used before. And none of this activity takes place in the absence of significant regulatory oversight.

Canada's nuclear industry needs to aggressively rebut our critics. Canadians need to be reminded that our industry is the most heavily regulated, and provides safe, reliable, affordable, GHG emission free electricity while protecting the environment. Two other critical messages that bear repeating are that our industry is safely containing and managing nuclear waste and that a long-term storage solution is underway.

It is also our responsibility to ensure that Canadians recognize that Canada's nuclear industry is a success story that contributes significant benefits to our economy. It means tens of thousands of high value jobs for Canadians, billions in government revenues, and tens of millions in R&D monies for our universities and colleges. As well, exporting low carbon nuclear generated electricity means hundreds of millions in revenue.

Nuclear energy's attributes guarantee it a solid global future. Canada's world-class nuclear industry can compete and continue to be a beneficiary from this trend. Our collective responsibility is to keep telling Canadians the facts about our industry and what is at stake.

David Sluss

Hydro Québec Explains Gentilly-2 Decision

September's CNWC newsletter ran an item entitled "CNSC Responds to Gentilly-2 article" describing the strong response of Michael Binder, President of the CNSC to a misleading regional Quebec newspaper article. Sixteen serious problems with Gentilly-2's design were cited in the article as Hydro Quebec's reasons for delaying the refurbishment project.

On August 16th, Hydro Quebec issued a communiqué on the matter. The company indicated that it had just completed an annual shutdown at the plant as part of its regular maintenance program and noted the satisfactory condition of the equipment.

The company's decision to postpone the refurbishment work was due to the revisions in the repair schedule at Point Lepreau in New Brunswick and at Wolsong in South Korea. Hydro Quebec indicated that it would closely monitor the work at these two plants and take full advantage of the lessons learned. The postponement would also provide the "necessary assurances regarding the identity of the next owner of Atomic Energy of Canada Limited (AECL), a leading supplier and contractor in the refurbishment project."

Hydro Quebec said it would continue to invest in the plant noting that Gentilly-2 has been providing reliable, safe and greenhouse gas free electricity for 25 years. The plant also contributes to overall reliability and stability of Hydro Quebec's transmission system, supports jobs and provides tens of millions of dollars in economic benefits.

On October 27th, the CNSC announced new dates regarding public hearings for Hydro Quebec's application for the renewal and combining of its operating licences for Gentilly-2 and its solid radioactive waste management facility. Originally planned for August 18th, 2010, the new hearing dates are December 10, 2010 and April 13th and 14th, 2011.

CNSC Issues Two Annual Reports

The CNSC's October 15th release of the 2008 Annual Report on Uranium Management Activities was good news for the industry. Relative to the Metal Mining Effluent Regulations (MMER), the uranium-mining sector was the best performing mining sector, with no exceedences in 2008. The report also noted that the CNSC and Environment Canada are meeting their regulatory commitments and responsibilities associated with the safe regulation and risk management of uranium releases from nuclear facilities. The first joint annual report, entitled Risk Management of Uranium Releases from Uranium Mines and Mills – 2007 Annual Report, was issued in 2009. The scope of the 2008 report has been expanded to include all uranium mines and mills as well as other CNSC regulated facilities releasing uranium in treated effluents.

On the 20th, the CNSC issued its Annual Report 2009-10, with a plain white cover page containing a blue box with the words "Fact: Nuclear in Canada is Safe". Page two of the report delivered additional key facts: "Nuclear remains one of Canada's safest industries to work in; the International Atomic Energy Agency says Canada's nuclear regulatory framework is mature, effective and safe; nuclear facility and equipment designs include multiple safety systems to protect Canadians; uranium mine and mill workers are among the safest in Canada on the job; Canada has a unique nuclear regulatory structure in which one regulatory body oversees all sectors; the CNSC has full-time inspectors working at each nuclear power plant and Chalk River in Canada; and Canada is committed to using nuclear solely for peaceful purposes."

The CNSC's Commission Tribunal held seven meetings and 11 public hearings involving 145 intervenors during the reporting period. As well, 32 abridged hearings were conducted. Nearly 2,000 compliance inspections were undertaken and about 3,000 licenses were managed. In addition, the CNSC issued five orders to licensees, shutdown the facility of one licensee and was involved in approximately 20 environmental assessments.

Cameco Acquires Land in Port Hope

On September 28th, Port Hope Council agreed to sell land the municipality had recently acquired from the federal government to Cameco. The sale cannot be finalized until 2015 in accordance with Port Hope's purchase agreement with the federal government.

Acquiring the land allows Cameco to continue to operate its uranium dioxide plant, which currently sits on leased land. The lease agreement expires in 2013 with an option to extend until 2018. The acquisition also enables Cameco to proceed with its Vision 2010 remediation plans. This involves cleaning up, modernizing and improving the appearance of its Port Hope conversion facility. About 150,000 cubic metres of inherited waste materials will be removed and stored, some buildings will be removed and new buildings may be constructed. Cameco's Vision 2010 plan is subject to a Comprehensive Study process required by the *Canadian Environmental Assessment Act*. Cameco is expected to submit an Environmental Impact Statement for the project in January of 2011.

On October 15th, Cameco was named again as one of Canada's Top 100 Employers. A national competition, organized by Mediacorp Canada Inc., selects the top employers. On the 21st, the United Steel Workers Local 8914 reached a tentative deal with Cameco. The local represents workers at Cameco's Key Lake and McArthur River mines in Saskatchewan. Two previous contract offers had been voted down and the local recently voted 97 per cent in favour of a strike if needed to support contract demands. Ratification votes for the current deal will take place over a two-week period.

Nuclear Challenges Continue in New Brunswick

New Brunswick's newly elected Progressive Conservative (PC) government is beginning to make its mark on the province's nuclear file. During the election campaign, the PC's leader, now Premier Alward, promised New Brunswickers that electricity rates would be frozen for 3 years.

On October 14th, NB Power indicated that the Point Lepreau nuclear station would start up in the fall of 2012. This refit schedule change is due to AECL's decision to remove and replace all 380 calandria tubes. A problem with seal tightness--some seals for the new tubes were not meeting the required standards –is causing the delay. The project is now three years behind schedule with cost overruns approaching a billion dollars.

Premier Alward continues to stand behind his rate freeze commitment and wants discussions with the federal government and AECL on the cost overruns. On October 15th, the Premier and his Energy Minister announced a new energy commission that will develop a long-term (10 year) energy plan for the province. The four-person appointed commission is expected to make specific recommendations in six months. The Commission will: consult with New Brunswickers, neighbouring provinces and states; develop a clear and measurable energy policy; examine long-term energy purchase opportunities, energy production, consumption and exports; develop measurable economic activity, environmental performance, cost, reliability and financial performance targets; and, develop a long-term debt-management strategy for NB Power.

A 2009 New Brunswick Department of Energy Report released on October 4th indicated that morale of Point Lepreau workers was adversely affected by the planned sale of NB Power to Hydro Québec. Concurrently, a post-refurbishment staff restructuring was rolled out that caused further employee concerns.

Challenges Continue for Bruce Power

Substantial progress is being made on the Bruce A Restart program. The last of Unit 1's 480 new calandria tubes were positioned on Oct. 11th with final fastening and seal tests expected to be complete by month's end. In Unit 2, 226 of the 480 new fuel channel assemblies were complete. The filling and flushing of the Unit 1 high–pressure re-circulating water system to remove any debris and leak test commenced on October 12th. Light water commissioning of the upgrader was completed on October 14th and on the 18th D20 was introduced into the refurbished system. So far more than 1,400 valves have been replaced or restored in Unit 2 with about 400 remaining to be replaced. In Unit 1 more than 600 valves still require work.

On October 21st, Bruce Power announced the launch of a new website— **www.rightthingtodo.ca** . This site's facts, videos, photos and opinions from experts will provide the public with easily accessible, verifiable information about the company's plans to recycle 16 steam generators.

Two days of CNSC public hearings, on September 28th and the 29th, heard the submissions of 79 parties on Bruce Power's application to send 16 steam generators by ship through the Great Lakes and St. Lawrence Seaway to Sweden. In his presentation, CNSC's Chief Regulatory Operations Officer, Ramzi Jammal stated that "staff conclude that the proposed shipment of 16 steam generators from Bruce Power to Sweden is safe. CNSC staff evaluation concluded that there will be no impact on the health and safety of the public and the environment. We recommend that the Commission accept our conclusion and issues for a period of one year the proposed transport licence and certificate to authorize the transport of 16 steam generators from Bruce Power to the Sweden."

However, on October 18th, the CNSC issued a public notice regarding the opportunity to file supplementary written submissions on Bruce Power's application. Based on the two days of public hearings, the CNSC determined that it required additional information from Commission staff in three areas: the environmental impact assessment conducted pursuant to the *Nuclear Safety and Control Act*; the emergency plan, including accident scenarios; and the *International Atomic Energy Agency Regulations for the Safe Transport of Radioactive Material* and the amount of radioactivity allowed in shipments.

The deadline for submitting a supplementary written submission is November 22, 2010. Filed submissions will be available to the public upon request to the CNSC's Secretariat.

The Commission will consider the additional submissions and then determine if further information is needed or if the Commission can proceed with a decision on the application.

Worth Repeating….

"The technologies we need are at hand.

On the demand side, solutions already exist and we must just go forward and invest. On the supply side, there are also mature and competitive technologies available. Further out, we will need to invest to develop: Generation 4 nuclear, carbon capture and storage, more efficient photovoltaic technologies, electricity storage, and second-generation sustainable bio fuels…

In terms of coal, there are enough resources to last for another several hundred years. In terms of nuclear, with second and third generation technologies, today's uranium resources will last for about two hundred more years. With Generation 4 technology the length of time could be extended 50 times! …

Closing Ceremony, World Energy Congress 2010 Declaration – Montréal 2010, Pierre Gadonneix, Chairman.

Maintenance, Safe Storage, New Build and History At Ontario Power Generation

Ontario Power Generation's [OPG] fall season has been occupied by maintenance, the safe storage of two nuclear units, a hundredth anniversary celebration and progress on Darlington new build.

Darlington Unit 2 was safely shutdown for a planned maintenance outage on September 9th, Pickering's Unit 7 on September 24th for planned maintenance and an inspection outage and on October 4th, Pickering Unit 5 was safely shut down for a brief maintenance outage.

The successful and safe storage of Pickering Nuclear Units 2 and 3 was completed on September 22nd. All four Pickering A units were taken out of service in 1997. Units 1 and 4 were refurbished and returned to service in 2005 and 2003 respectively. Following a business case review, OPG decided against refurbishing the remaining units, deciding instead to place them in safe storage. All of the fuel and heavy and light water systems were removed for Units 2 and 3, and shared systems, such as fire suppression equipment, were separated. During the five-year project, over 500 employees and contractors worked about 500,000 hours with only one lost time accident. The project was completed two weeks ahead of schedule and about $15 million below the projected budget of $350 million.

In early September, the Joint Review Panel (JRP) for the Darlington New Build Project indicated that October 8th was the deadline for public comments on OPG's Environmental Impact Statement and updated Site Preparation Licence application. Following a review of these comments the JRP will set a date for public hearings on the project.

On October 7th, OPG's celebrated the electrification of Kitchener, previously called Berlin. A hundred years before on October 11, 1910, Prime Minister Mackenzie King, Premier James Whitney and Adam Beck threw the switch to receive electricity from Niagara Falls. Berlin had been chosen for the honour as the 1903 host of the "Berlin Convention". Delegates from the major municipalities of southwest Ontario had gathered in the city to discuss the transmission of power from Niagara Falls to cities and towns in the region.

Sir Adam Beck, Courtesy of Hydro One

In short...

U.K. Government Kind Of Supports New Nuclear

On Monday, October 18, 2010 the Minster of Energy and Climate Change, Chris Huhne, announced support for the building of new nuclear plants in Britain. However, that support does not extend to public funding for the new plants.

"This means that there will be no levy, direct payment or market support for electricity supplied or capacity provided by a private sector new nuclear operator," stated Huhne. Nevertheless, the Minister did not rule out the state taking on financial risks or liabilities related to new nuclear plants for which it was compensated.

The government is expected to clarify details around a carbon pricing plan that is expected to bolster the economic case for low carbon renewable, nuclear and carbon capture and storage projects. Establishing the right floor price for carbon could make new nuclear reactors economically competitive with coal-fuelled power plants.

The Minister's National Policy Statement to the Parliament also indicated that the list of potential sites for the new nuclear plants had been reduced from ten to eight.

Japan Forms Nuclear "A" Sales Team

On October 22nd, a consortium of 13 Japanese companies formed the "International Nuclear Energy Development of Japan Co., Ltd. [JINED]. This consortium will support the creation of proposals to support nuclear power plant projects in emerging countries. The Japanese government is providing both legislative and financing support. JINED will provide these public private proposals to help introduce safe and reliable nuclear power plants for these countries and enable the dissemination of Japanese technologies and know how.

Consortium members include Japans major utility companies, Toshiba Corporation, Hitachi Ltd., Mitsubishi Heavy Industries Ltd., the Innovation Network Corporation of Japan, and the Ministry of Economy, Trade and Industry of Japan.

SNC-Lavalin Adds Nucleonex To Its Fold

On October 21, SNC-Lavalin announced the purchase of Montreal-based Nucleonex. The company's core business includes nuclear safety analysis, licensing support and regulatory affairs, risk management, environmental qualification and plant life-cycle management.

The acquisition fits well with SNC-Lavalin's areas of expertise including heavy-water plant construction, steam generator replacement, retrofits, waste management audits, and nuclear plant decommissioning.

India Goes Nuclear

In early October, India announced an ambitious plan to develop 63,000 MW of nuclear capacity by 2032.

This will include: sixteen indigenous Pressurized Heavy Water Reactors (PHWR), with ten based on reprocessed uranium; and, about 40,000 MW from Light Water Reactors.

The plan also calls for the export of 220 MW, 540 MW and 700 MW PHWR by 2032 to friendly countries. Post 2032, metallic fuel FBRs and reactors based on thorium 232 and the uranium 233 fuel cycle.

The Chairman and Managing Director of India's Nuclear Power Corporation, S.K. Jain, noted that Asia's nuclear strengths included its large pool of technical manpower, developed nuclear technologies, developed industry and allied infrastructure and proven safety and cost advantages.

WTO Complaint Filed Against Ontario's Green Plan

Japan launched a complaint with the World Trade Organization (WTO) in early September over Ontario's subsidies for solar and wind power projects.

Ontario used a Feed-in-Tariff, providing a fixed price for solar and wind projects and preferential transmission access to clinch a $7 billion deal with Korea's Samsung. The company will build wind and solar farms and four plants to manufacture green energy projects.

Japan argues that Ontario's requirement that a certain percentage of the project costs come from Ontario goods and labour violates Canada's international trade obligations.

Both the United States and the European Union have subsequently joined the complaint process. The first step in the dispute resolution process involves consultations. If unsuccessful, the complaint will go before a panel for a final ruling.

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The Canadian Nuclear Workers' Council is an organization of workers represented by unions working in various areas of the Canadian nuclear industry which includes uranium mining, nuclear fuel processing, nuclear power stations, radial isotope production for medical and industrial purposes, and nuclear research.

The member groups are:
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