

Message from the President

Canada's Nuclear Industry - Talk It Up

A famous Yogi Berra quote, "déjà vu all over again" captures the ongoing challenge facing our industry—countering apocalyptic rhetoric with the facts. Recently, there has been lots of media coverage of anti-nuclear advocates, re-energized by the tragedy at Fukushima, opposing existing and proposed nuclear projects.



In Ontario, protesters carrying placards with slogans like "Nuclear = cancer" are demanding the re-location of the GE/Hitachi fuel processing facility that has operated safely for 65 years. Environmental groups have taken legal action to prevent the refurbishment of the Darlington reactor units and the two new proposed units at that site, and are trying to block the Deep Geological Repository at Kincardine. In Quebec, anti-nuclear groups are trying to influence decommissioning process for Gentilly-2, while in New Brunswick environmentalists are raising safety concerns and are demanding the closure of the Point Lepreau station.

Fortunately, our industry has the facts and networks in place to counter this anti-nuclear bombast. We have a growing list of environmentalists who support nuclear energy such as: the 10,000 plus member International Association of Environmentalists for Nuclear Energy, which includes a Canadian Chapter; and Robert Stone, once a passionate anti-nuclear environmentalist who has just released his pro nuclear film "Pandora's Promise".

In April 2012, the Nuclear Literacy Project and its partners—the National Nuclear Science Week, the Society of Nuclear Medicine and Molecular Imaging and the National Museum of Nuclear Science & History launched a new website. Here at home the Canadian Nuclear Association and its membership all provide fact-based information and outreach needed to educate our neighbours, friends and elected officials about nuclear energy.

Exxon Mobil's 2013 *Outlook for Energy: A View to 2040* shows what's at stake globally and why they think nuclear energy generation will double during this period. Three factors underlie their projection: 2 billion more people; an 85% increase in global electricity demand; and, the need to reduce GHG emissions.

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Oil is expected to remain the #1 global fuel with natural gas overtaking coal for the #2 spot. Electricity generation will be the largest driver of the demand for energy, with natural gas representing 30% of that generation compared to 20% today. By 2040, nuclear and natural gas generation in Non OECD countries is expected to increase by 150%.

So what does this mean for our nuclear industry and more importantly Canada? The short answer—with continued investments in our CANDU based industry we can create good jobs, more economic growth and opportunities, increase our energy security, lower GHG emissions, and improve the competitiveness of our businesses and industries in the international marketplace.

How do we get there? Déjà vu all over again—use every opportunity that presents itself to talk up Canada's nuclear industry and the significant environmental and economic benefits that are at stake.



Cameco Activities Pick Up Steam

In mid November 2012, the CNSC made two announcements regarding participant funding for two Cameco licence applications in northern Saskatchewan: the 10 year licence renewal for the decommissioned Beaverlodge mine/mill site; and, a 10 year relicensing of the Cigar Lake uranium mine. The deadline for funding applications closed on December 7, 2012. The CNSC indicated that it would be holding a two-day public hearing where both applications would be considered on April 3rd and 4th, 2013 in Saskatoon.

On December 12, 2012, Cameco announced the signing of a collaboration agreement that will guide future co-operation and the sharing of benefits between the uranium mining operations and the Northern Community. The agreement signed by Cameco, Areva Resources Canada Inc., the Northern Village of Pinehouse and Kineepik Metis Local Inc., is estimated to have a potential value of \$200 M over the next 11 years. Specific commitments from the mining companies deal with workforce development, business development, community engagement, environmental stewardship and community interest.

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One of the commitments will involve the mining companies making investment payments to a community trust that will be established by Pinehouse for the benefit of the community's residents. Mike Natomagan, mayor of Pinehouse and president of Kineepik Metis Local Inc., stated that, "this agreement will provide long-term economic benefits to our community and gives us the ability to plan for the future. It allows us to expand our strong mining culture and do it our way."

On December 18th, 2012 Cameco completed the purchase of the Yeelirrie uranium project in Australia followed by the acquisition of NUKEM Energy GmbH, a world leading trader and broker of nuclear fuel products and services on January 9th, 2013.

Controversy Swirling Around Gentilly-2 Closure



*Gentilly 2 Station,
Courtesy of CANDU Energy Inc.*

On January 29th and 30th, 2013, a range of stakeholders presented briefs to the Parliamentary Committee on Gentilly-2 in the Quebec National Assembly.

In the lead up to the hearings various stakeholders made their positions known to the public. Environmental groups requested that the decommissioning period be reduced from 20 to 50 years. The President of the Chamber of Commerce and Industry of Coeur-du-Quebec stated that the closure decision had been made too quickly and was not based on sound economics. Hydro Quebec had already spent about \$965 M for equipment to refurbish the reactor. As well, a number of groups in the area surrounding the station expressed concerns about how the \$200 million economic diversification would be allocated. One of the leadership candidates with Quebec's Liberal Party indicated he would overturn the closure decision if elected.

Ramzi Jammal, Executive Vice President and Chief Regulatory Officer of the CNSC, made a presentation to the Committee on January 30th, 2013. He outlined the mandate and responsibilities of the CNSC in the decommissioning process. The reactor was shutdown on December 28th, 2012 and the CNSC and Hydro Quebec subsequently signed a protocol on January 15th, 2013. Fuel removal began on January 17th, 2013.

The decommissioning phases include: general planning; safe storage; the application for a decommissioning licence; an environmental assessment in support of the former; decommissioning; waste transfer; and site restoration. The current regulatory strategy calls for the decommissioning licence to be filed in 2015 with the licence expected in 2016. A detailed decommissioning plan and environmental assessment will occur in 2052 followed by an abandonment licence in 2062. On February 2013, Hydro Quebec announced it would not begin to dismantle the station for 50 years.

OPG-Success and Public Service

In remarks to the Ontario Energy Network on December 5th, 2012, Tom Mitchell, OPG's President and CEO expressed his views on the value of the company to Ontario. Mitchell sees public/private partnerships as the best way to tackle the estimated \$350 billion renewal of Canada's electricity infrastructure.

Mitchell indicated that OPG's partners had helped the Darlington facility be recognized by the Institute of Nuclear Power Operations as one of the top performing stations in the world. He noted that going forward OPG needs and wants partners for the 15-year Darlington Station refurbishment project.

On December 20th, 2012, the CNSC announced acceptance of OPG's proposed \$14,221 million financial guarantee for the decommissioning of the company's Class I facilities. The CNSC will now amend the operating licences for these facilities to update the references pertaining to the financial and decommissioning plans. CNSC staff will continue to review OPG's annual report to ensure the financial guarantee remains valid and will report any changes to the Commission.

Class I facilities include: the Darlington, Pickering A and B, and Bruce A and B stations; the Western, Pickering and Darlington waste management facilities; the Radioactive Waste Operations Site-1 (on the Bruce site); and the Bruce Power Central Maintenance and Laundry Facility.

On January 21, 2013, OPG announced that the construction of the Darlington Energy Complex was essentially complete. It will be the headquarters for the Darlington refurbishment project and support ongoing operations. The 300,000 square foot building will house: a high tech training centre; full-scale mock-up of the reactor core; a tool testing facility; office space for 450 staff; a public information centre; and a 64,000 square foot warehouse.

As well, OPG indicated two separate oversight mechanisms would be in place to monitor the progress on the refurbishment project—CALM Management Consulting Inc as an independent advisor, and an independent external oversight organization reporting to OPG's Board of Directors.



*Darlington Energy Complex,
Courtesy of Ontario Power Generation*

2012 A Successful Year For Bruce Power

On December 19th, Bruce Power issued a press release celebrating the company's top 12 successes in 2012. These included the successful return to service of Units 1 and 2 and Bruce B's Unit 6 becoming the top-ranked CANDU unit in the world. Unit 6 ran continuously over 500 days and achieved perfect 100 rating on the World Association of Nuclear Operators' Nuclear Performance Index [WANO].

The company received its best report card in its 11-year history from the Canadian Nuclear Safety Commission. Bruce Power received a "Fully Satisfactory" rating for security and conventional health and safety functions. Other areas were rated as "Satisfactory".

The release also noted the hundreds of millions invested in the outages for Units 3 and 4 that will extend the life of the units. Other long-run performance records were set during the year: Unit 4 ran continuously for 570 days; Unit 7 bested its previous record; and, overall Bruce B set a record for the longest time all four units simultaneously produced electricity in the company's history.

Bruce Power also noted the improvements made to its Emergency Response capabilities and last year's successful five-day, large scale Huron Challenge-Trillium Resolve drill.

Accomplishments were also celebrated with respect to the company's social and community activities. Bruce Power received several awards including: the Canadian Council of Aboriginal Business's silver level Progressive Aboriginal Relations award; Top Employers for Young People; and Top 50 Most Engaged Workplaces.

The company also donated over \$1.4 million to numerous local community and non-profit organizations. On December 18th, Bruce Power indicated that its Project Management and Construction Division and 20 business partners had raised \$100,000 for the Wounded Warriors Foundation.

The New Year also began on a positive note with the Bruce Power's January 31st announcement of the completion of the 25-day planned outage for Unit 5. This is one of four units that provide Cobalt 60 used to treat cancer patients.

Point Lepreau Maneuverings

NB Power announced on November 23rd, 2012 that the Point Lepreau Generating Station was commercially operational. On December 1st 2012 the company announced that the station would be slowly reducing reactor power to improve the boiler water chemistry. This coincided with the upgrade to the New England power grid, taking place between November 28th and December 7th. This was the second phase of the New

England Power Grid and Maine Power Reliability Program and required limiting power output from the Lepreau station while the work was being performed.

As part of the renewal of the operating licence for Point Lepreau, the CNSC required NB Power to complete a site-specific hazard assessment. NB Power released preliminary findings in December 2012 indicating that the station is sound and will continue to operate safely. NB Power engaged third party experts to undertake the assessment. Seasonal factors have complicated the completion of all data gathering until the summer of 2013. The final report is expected in 2014.

In early January 2013, the company announced that it was preparing its case to the New Brunswick Energy and Utilities Board [EUB] relating to the Point Lepreau Generating Station [PLGS] deferral account balance and the projected operating life of the refurbished facility. During the five-day hearing, testimony was provided by NB Power and several expert witnesses on: the expected 27-year life of the refurbished station; the accuracy and

allocation of costs; and the appropriateness and compliance of the accumulated costs in the PLGS deferral account.

The EUB is expected to take several weeks to render their decision and will then hold hearings to consider appropriate financing and amortization methodology. This will be used to determine the amount to be recovered and its impact on NB Power's rates. The company, based on a 10-year forecast believes a two per cent increase will be adequate to recover the deferral account balance.

Worth Repeating....

The following quote was taken from a January 30, 2012 response from Rick Meyers, VP, Nuclear Energy Institute to a Wall Street Journal article "Can Gas Undo Nuclear Power?" appearing that same day.

"It also bears noting that extremely low natural gas prices in the United States are not sustainable. Low natural gas prices are caused by a combination of reduced demand for natural gas (due to subpar economic growth), abnormally mild weather for the past several winters and a major increase in supply (due to improved drilling techniques that have unlocked vast reserves of shale gas). As the result of low gas prices, producers of natural gas have already slowed drilling: the number of rigs drilling for natural gas in the United States has dropped approximately 50 percent in the past 12 months. At the same time, the historic volatility of natural gas prices continues to be seen in the spot market. Just last week, natural gas prices in New England and New York City topped \$30 per million BTUs, the highest level seen this winter, according to the U.S. Energy Information Administration. For New England, this was actually the highest level seen since January 2004."

In short...

Power Workers' President Receives The Order of Ontario



Don MacKinnon,
Courtesy of the Power
Workers' Union

On February 6, 2012, Don MacKinnon was among the recipients invested with the province's highest official honour by the Honourable David C. Onley, Lieutenant Governor of Ontario at a Queen's Park

ceremony.

Recipients of The Order of Ontario are Ontarians who have demonstrated "a high level of individual excellence and achievement in any field benefiting the people of Ontario or anywhere in the world."

The official announcement from the Ministry of Citizenship and Immigration described Don as "a lifelong advocate of Ontario's energy industry and an authority on its electricity system who has devoted his career to creating safe, quality jobs for Ontarians. His innovative approach to trade unionism and labour relations has become a model for effective labour management in Ontario."

A Canadian Nuclear Association news posting aptly described this as a modest statement of Don's accomplishments. Congratulations Don. Thank you for your dedication and commitment to championing safety in the workplace and bettering the lives of working people everywhere.

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TEL 416 725-5776
FAX 416 481-7115
e-mail dshier@pwu.ca

Contributions should be sent to the above address.

PUBLISHER: David Shier
EDITOR: Paul Newall

Nuclear Power=More Sustainable Energy Systems

According to the World Energy Council [WEC], countries where low carbon energy sources such as hydro and nuclear make up a higher share of the energy mix are closest to achieving sustainable energy systems.

WEC released its 2012 Energy Sustainability Index in December 2012. The Index contains a profile and performance of the energy mix for each WEC member country. Sweden, Switzerland, Canada, Norway, Finland, New Zealand, Denmark, Japan, France and Austria are ranked as the top ten performing countries.

More than 90 countries are characterized as "far from achieving" sustainable energy systems. Continuing challenges include: the need for environmental impact mitigation; access in developing and emerging countries to high-quality, affordable energy systems; and achieving energy security.

Toshiba and Westinghouse

In late December 2012, Toshiba indicated that it was in talks with three parties to sell part of its stake in Westinghouse Electric Co. About six years ago Toshiba purchased a 77 percent interest in the company from British Nuclear Fuels PLC. In January of this year, Toshiba acquired an additional stake from Shaw Group raising its ownership to 87 percent. Toshiba is expected to sell up to 36 percent of its current Westinghouse holding. Only one of the interested buyers has been identified—Chicago Bridge & Iron Co. This Netherlands based energy infrastructure firm recently acquired the Shaw Group.

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.

EU-IAEA Renew Co-operation

On January 25th, 2013, the European Union and the International Atomic Energy Agency issued a joint press release announcing future work priorities and areas for possible enhanced collaboration. These included:

- Strengthening Nuclear Safety and Security cooperation;
- Expanding cooperation in Science, Research and Innovation (including Fusion Technology), Technical Cooperation, Nuclear Applications, and other relevant areas;
- Consideration of joint activities in the field of Human Health (cancer therapy, nutrition), Water Management and Environmental Protection; and,
- Enhanced project impact

Nova Scotia Study Rejects Nuclear Option



A subsidiary of Emera Inc., NSP Maritime

Link Inc. considered nuclear power as one of the alternatives to the Muskrat Fall's hydroelectric project in Labrador. NSP Maritime Link was created to oversee Nova Scotia's estimated \$1.52 investment in the Muskrat project. Up to 30 per cent of the province's total energy requirements will be met via a 180-kilometre subsea cable. Emera engaged Barra Strategies to undertake a study of nuclear technologies used in Canada and around the world. The nuclear option was rejected on the basis of cost. As well, Nova Scotia has a law in place that prohibits nuclear generation.

The member groups are:

CANADIAN UNION OF PUBLIC EMPLOYEES
• CHALK RIVER TECHNICIANS AND TECHNOLOGISTS UNION • COMMUNICATION, ENERGY & PAPER WORKERS UNION • CANADIAN AUTO WORKERS UNION • HYDRO QUEBEC PROFESSIONAL ENGINEERS UNION • INTERNATIONAL ASSOCIATION OF FIREFIGHTERS • INTERNATIONAL ASSOCIATION OF MACHINISTS & AEROSPACE WORKERS • INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS • POWER WORKERS' UNION • PROFESSIONAL INSTITUTE OF THE PUBLIC SERVICE OF CANADA • PUBLIC SERVICE ALLIANCE OF CANADA • SOCIETY OF PROFESSIONAL ENGINEERS & ASSOCIATES • UNITED STEELWORKERS • ALLIED TRADES COUNCIL • INTERNATIONAL BROTHERHOOD OF BOILERMAKERS