



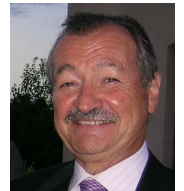
# Canadian Nuclear Worker

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Update

## Nuclear Energy Developments in Ontario

Three recent and significant developments related to nuclear energy in Ontario warrant further coverage in the CNWC's December 2016 Newsletter.



### Extending the Operation of the Pickering Nuclear Generating Station Analysis

On November 18th, the Power Workers' Union held a press conference at Queens Park to present the highlights of a comprehensive emissions and economic assessment of extending the operation of the Pickering Nuclear Station for an additional four years.

The assessment, prepared by Strategic Policy Economics (Strapolec) looked at the significant economic and environmental benefits of operating the 3,100 megawatt (MW) beyond its scheduled closing date in 2020 to 2024.

Strapolec's study demonstrated that the extended operations would address the province's pending reliability reserve capacity shortfall, substantially reduce Ontario's greenhouse gas (GHG) emissions, keep electricity prices affordable, create jobs, and grow the economy.

Extending the Pickering Station's operations by four years would help Ontario's Independent Electricity System Operator (IESO) fill a projected 2,000 to 3,000 MW shortfall and help bring the province in compliance with North American reliability requirements. By displacing natural gas generation, the extended operations would avoid over 18 million tonnes of carbon dioxide. Electricity system costs would be reduced by over \$1.5 billion dollars to the benefit of industrial and residential consumers. The extended operations would also preserve 40,000 person years of employment and inject \$7 billion into Ontario's economy.

The PWU is requesting that the Ontario government direct OPG and Ontario's IESO to consult with the Canadian Nuclear Safety Commission for the purpose of securing approval for the longest possible period of continued operation.

The full report can be found at [www.pwu.ca](http://www.pwu.ca).

### Bruce Power Secures Agreement with Ontario for A Greenhouse Gas Emission-Free Future Electricity Supply

On December 3rd, Bruce Power announced that it had reached an amended, long-term agreement with Ontario's IESO to secure 6,300 MW from the Bruce Power (BP) site. The amended agreement, which takes effect on January 1st, 2016, will see BP invest \$13 B in a long-term refurbishment program.

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Between 2016 and 2020, the company will invest about \$2.3 B (\$2014) in life-extension activities for Units 3-8 in support of the refurbishment program. The six refurbishments are expected to cost \$8B (\$2014), in addition to another \$5B (\$2014) for a range of other life-extension activities between 2016 and 2053. The refurbishment of the first reactor, Unit 6, will commence in 2020. A series of off-ramps consistent with the province's Long-Term Energy Plan related to refurbishment performance and changes in market conditions have been built into the agreement.

Bruce Power's investments will optimize the operational life of the site by decades and generate significant ratepayer, electricity system and economic benefits. Last October, BP released an economic impact study ([www.brucepower.ca](http://www.brucepower.ca)) that described these benefits in detail. For example, these investments will secure an estimated 18,000 jobs directly and indirectly and create an additional 3,000-5,000 jobs annually throughout the refurbishment program. The *"Affordable Power. Jobs & Growth"* report was jointly authored by the: Provincial Building and Construction Trades Council of Ontario; Southwest Economic Alliance; Canadian Manufacturers & Exporters; The Society of Energy Professionals; the Power Workers' Union; and, Bruce Power.

Since 2001 the company and its partners have already invested \$7 B in the eight publicly owned reactors at the Bruce site. The site now provides about 30 percent of Ontario's electricity at 30 percent below the average residential cost of power.

On the same day, three labour unions ran full-page opinion pieces in major provincial newspapers, highlighting the importance of nuclear power to Ontario. The placements were endorsed by the leaders of three important Ontario labour organizations: Patrick Dillon, Provincial Building and Construction Trades Council of Ontario; Don MacKinnon, Power Workers' Union; and, Scott Travers, Society of Energy Professionals. The Canadian Manufacturers and Exporters and several supply chain companies also expressed support for the agreement.

## **OPG's President and CEO Makes the Case for Darlington Refurbishment**

On December 7th, OPG's new President and CEO, Jeff Lyash spoke at an Ontario Energy Network lunch. Mr. Lyash noted "clean power is the foundation for Ontario's competitiveness and progress". Low carbon nuclear is a critical part of that clean power supply. The Darlington Station provides cost-effective and virtually GHG emission free power for one in every five homes and businesses in Ontario.

Lyash described refurbishing Darlington as an investment in Ontario that means clean air, jobs, innovation and lower energy prices. OPG commissioned the Conference Board of Canada to do a report assessing the potential benefits ([www.pwu.ca](http://www.pwu.ca)) of refurbishing the station.

The total estimate for the project is estimated to be \$12.8 billion, which includes interest and escalation. The "expected yield" is expected to generate \$14.9 billion in economic benefits for Ontario. Between 2010 and 2023, an average of 8,800 jobs are expected annually. House revenues are anticipated to increase by \$8.5 B, government revenues (all three levels) will be about \$5.4 B and \$94 million in exports. Over the extended 30 plus year operating life, the Darlington station is expected to contribute another \$50 B in economic benefits.

Lyash noted that about 96 percent of OPG's suppliers are based in Ontario and that more than 50 companies from about 25 communities are directly engaged in the project. He sees the cost of Darlington's power post refurbishment as less than the other sources considered, including imports from other provinces. OPG currently supplies electricity at a 40 percent discount to the rest of the market, which helps moderate electricity bills across Ontario.

Darlington, as the best performing Candu plant in the world gives OPG an advantage at the start. However, even with this advantage, Lyash says success will require a relentlessly, focused leadership team, a committed workforce, and supportive suppliers. Exhaustive planning, risk mitigation, lessons learned and robust oversight are other critical factors for success.

OPG is committed to being "on schedule, on budget, at the level of quality that world-class nuclear plants require." OPG's Board of Directors has endorsed the Darlington refurbishment plan. Currently, the project is being considered by OPG's shareholder, the Ontario Government.