



Canada: Civil Nuclear Additional Opportunities – US \$20 Billion in Nuclear Reactor Refurbishments

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Summary

In January 23, 2015, Ontario Power Generation (OPG) announced an investment of CDN\$ 12.8 billion in refurbishing the Darlington Nuclear Power Station. This is an Ontario Government decision as owner of OPG. The Canadian Nuclear Safety Commission (CNSC) granted a ten year license for OPG's Darlington Nuclear Generating Station.

Together with the refurbishment of 6 reactors at Tiverton-based Bruce Power nuclear generation station, announcement December 2015, the Canadian Civil Nuclear market will benefit of approximately CDN \$ 26 Billion (US\$ 20 billion) over 10 years starting in 2016. Additional opportunities are available in the annual operating necessities.

Background

Darlington Nuclear Power Plant has 4 CANDU nuclear reactors of total output capacity 3,500 MW. The announced budgeted investment includes contingencies amounts in case of cost-overruns. OPG is owned by the Ontario Government which decided and approved this investment.

Bruce Power is operating 8 nuclear power generation units equipped with CANDU nuclear reactors of total output capacity 6,610 MW (gross) at Tiverton, ON; Bruce A with 4 reactors of 750 MW each and Bruce B with 4 reactors (3 of 785 MW and 1 of 820 MW).

Bruce A units 1 and 2 were refurbished and restarted in 2012. The Ontario Power Authority (OPA) entered negotiations with Bruce Power for the refurbishment of the remaining units and at present, the Independent Electricity System Operator (IESO), which was recently merged with OPA, signed the contract for the refurbishment of the 6 remaining units.

Bruce Power will make the investment from its own funds and secure 6,300 MW of baseload generating capacity and will benefit from a set price of 77 cents per kilowatt hour starting January 1, 2016, for the time of the contract. The actual construction works for refurbishment will start in 2020.

Opportunities for U.S. Companies

Significant opportunities exist for U.S. manufacturers and suppliers of nuclear power based energy generating systems, equipment, and components seeking to enter Ontario's market. All OPG and Bruce Power units consist of main equipment - a CANDU (short for CANada Deuterium Uranium) pressurized heavy water reactor used for generating steam, a steam turbine, and the electric power generator- and a large variety of ancillary equipment necessary

for such installation. OPG announced that it is prepared to start the refurbishing works from 2016. It is expected that Bruce Power will also start working with general contractor(s) which will start planning and contracting the necessary supply program to secure equipment and materials in order to start the actual refurbishment on time from 2020. The procurement may include many components for the main equipment, inside the reactor or such as the steam turbine rotor (as done for the other units), and a large variety of electric motors, hydraulic pumps, compressors, process controls, as well as piping, fitting, and many materials, etc. U.S. companies may have opportunities to become suppliers for the above refurbishments.

Sources

OPG announcement - [Darlington Refurbishment](#)

The Globe and Mail - [Ontario Power Generation to refurbish Darlington reactors](#)

Ontario Government News Release - [Ontario Commits to Future in Nuclear Energy](#)

IESO- Announcement - [Bruce Power Nuclear Refurbishment](#)

For detailed information on Ontario's Long-Term Energy Plan, please see: [Achieving Balance: Ontario's Long-Term Energy Plan \(LTEP\)](#)

For More Information

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