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Our unused weapon against climate change

EDITORIAL

CRITICS OF CARBON TAXES often argue that such measures designed to limit man-made climate change will achieve little so long as countries like China and India are burning ever more coal and building even more coal-fired power plants.

The problem shared by China and India is a relative lack of alternatives, their growing populations and economies require much more electricity than could ever come from wind and solar farms and neither country is the source of much oil and natural gas.

And while one option might be nuclear energy, serious nuclear power plant accidents, including the Fukushima Daiichi disaster in Japan in 2011, the Chernobyl disaster in Ukraine in 1986, and the Three Mile Island accident near Harrisburg, Pennsylvania 40 years ago in 1979, have led to the virtual abandonment of an option that involves no greenhouse gas emissions.

But one thing seldom mentioned by those commenting on the disasters is that all the power plants were of a different design from those in Canada, where all the reactors in Ontario, Quebec and New Brunswick were of the unique CANDU design and the only serious mishap was caused by the failure of Ontario Hydro to inspect the reactors' pressure tubes.

There have been two major types of CANDU reactors, the original design of around 500 megawatts (MW) that was intended to be used in multi-reactor installations in large plants, and the larger CANDU 6 in the 600 MWe class that is designed to be used in single stand-alone units or in small multi-unit plants. CANDU 6 units were built in Quebec and New Brunswick, as well as Pakistan, Argentina, South Korea, Romania, and China, and a non-CANDU 6 design was sold to India. The multi-unit design was used only in Ontario's Bruce and Darlington plants, with outputs ranging from 750 to 880 MW per unit.

By the early 2000s, sales prospects for the original CANDU designs were dwindling and Atomic Energy of Canada began work on an advanced design, with the first units to go into an expansion of the Darlington plant. But when the need to enlarge Darlington disappeared, the project was cancelled in 2009 and two years later the Harper government opted to sell off the CANDU design to a wholly owned subsidiary of SNC-Lavalin along with the former reactor development and marketing division of AECL at that time. The new owner has offered support services for existing sites and is completing formerly stalled installations in Romania and Argentina through a partnership with China National Nuclear Corporation. SNC Lavalin has apparently been exploring sales to Argentina, China and Britain but thus far without success,

In the circumstances, we think whichever party wins this month's election should look seriously at returning CANDU to AECL and launching a major marketing operation aimed at the Far East, pointing out that the Canadian design is the only one with a proven safety record Its website boasts buttressed by a unique ability to re-fuel the reactors while they are online and to completely retube a reactor when necessary, extending the life of the power plant indefinitely.

Perhaps the best idea would be to place the new sales effort in the hands of Bruce Power, Canada's first private nuclear generator, which is currently providing 30 per cant of Ontario's power from its management of the Bruce Nuclear Power Development near Kincardine. Its website boasts that the eight Bruce units ?provide over 4,000 full-time, direct jobs to highly skilled employees, and thousands more indirectly. We inject billions of dollars into Ontario's economy annually, while producing safe energy that produces zero carbon emissions.?

Bruce Power is a partnership among TransCanada Corp., OMERS Infrastructure Management Inc. (a trust established by the Ontario Municipal Employees Retirement System), The Power Workers' Union and The Society of Energy Professionals. Over 90 per cent of the employees also own a part of the company.