

## Made-in-Ontario nuclear power

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CANDU reactors best choice for province, says Alan Middleton

Ontario Energy Minister Dwight Duncan mused in public earlier this month about the need to build new nuclear power plants in Ontario.

This spurred several newspapers, including the Toronto Star, to write editorials supporting the need for new nuclear plants. Given the energy situation this seems all well and good.

However, it now seems the debate is shifting from whether we need new nuclear generation, to what nuclear technology we should use, even implying that we could invite the French and Americans to build their brand of nuclear technology here in Ontario.

This is very odd. Made-in-Ontario nuclear technology - CANDU - is one of the top-performing reactors in the world.

We have a world-class nuclear industry here in Ontario. The CANDU 6 operates in five countries on four continents. In terms of average lifetime capacity factor, the single most important measure of reactor performance, the CANDU 6 fleet ranks well ahead of the French and U.S. reactor fleets. In 2002, the top three CANDU 6 units actually achieved an average 97.1 per cent capacity factor.

CANDU 6 is already licensed by the Canadian Nuclear Safety Commission and is considered to be among the safest reactors in the world. CANDU 6 is a proven safe, clean, reliable and affordable solution that is ready to fill Ontario's looming electricity supply gap in the shortest possible timeframe.

It sounds like we are suffering once again from the perennial "it can't be good if it's Canadian" syndrome!

There is a nuclear renaissance underway around the world and the foundation of Ontario's nuclear industry, Atomic Energy of Canada Ltd. (AECL), is at the forefront. AECL has designed, built and delivered five reactors overseas in the last 10 years - all on or ahead of schedule and on budget. The foreign sale of a pair of CANDU 6 reactors enables the Ontario nuclear industry to employ more than 10,000 people in high-paying, high-tech jobs and to contribute billions to the Ontario economy.

To invite the French and Americans to bid on a project on the Canadian nuclear industry's home turf would be extremely short-sighted. At a time when nuclear power is experiencing a major worldwide resurgence, the Ontario government would end up pulling the rug from beneath our own nuclear industry by sending a powerful signal of non-confidence to potential customers around the world.

Furthermore, examination of the relative capabilities of the competition suggests that the French and Americans are nowhere near ready to build new nuclear reactors in Ontario

Reactor design and construction is not the core business of either Westinghouse or General Electric. Their new reactor designs are still on the drawing board and have never been considered for Canadian licensing review. It is also important to consider that a new reactor has not been built in the U.S. since the 1970s and, as a result, the industry that makes components for American reactors has withered away.

AREVA is a vertically integrated nuclear power company owned by the French government. It makes its money by selling the fuel, parts and services needed to support its reactors and has been reputed to sell reactors at a discount to lock customers into long-term dependence.

Canadian regulators are unfamiliar with the French technology and have never licensed the French reactor that AREVA would like to sell to Ontario. The fact that it doesn't have what are termed passive safety systems (advanced CANDUs have numerous passive safety systems) should also make it very unattractive to Canadian regulators.

Both the AREVA and the General Electric reactors are rated at around 1,500 to 1,600 megawatts and either would be the single-largest generating station on the Ontario grid, thus requiring the province to pay for almost 1,000 megawatts of additional reserve as backup in case a large reactor went out of service.

Foreign reactors use enriched uranium fuel assemblies that Ontario would need to buy from a foreign country. CANDU, on the other hand, uses natural uranium fuel that is mined in Saskatchewan and processed and fabricated here in Ontario.

One wonders why Ontario is even contemplating opening our doors wide to foreign interests at the expense of a local technology that employs thousands of people and produces the best reactors in the world.

We should sit down immediately at the negotiating table and hammer out a deal with the federal government that will allow us to proceed with the environmental approvals, licensing and construction to bring new CANDUs on line before the lights go out in Ontario. Then we should announce to the world that Ontario is proudly going ahead with our made-in-Ontario solution CANDU.

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