

## Ontario's nuclear future

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With public discussion about the need to build new nuclear plants in Ontario now shifting to what technology is best, the thousands of men and women who work in Ontario's nuclear industry have an answer: Only the best will do, and that's our home-grown CANDU technology. Years of experience here in the province and a world-class track record around the world has made a rock solid case that Canada's own CANDU can beat any other nuclear technology hands down. Here's why.

### TOP RATED PERFORMANCE AND SAFETY:

AECL's CANDU 6 (700+ megawatt class) reactors are operated in five countries on four continents by six different utility customers and have outstanding performance track records. In terms of average lifetime capacity factor, the single most important measure of reactor performance, the CANDU 6 fleet, at nearly 88 per cent, ranks well ahead of the competition in the international marketplace. In 2002, the top three CANDU 6 units actually achieved an average 97.1 per cent capacity factor.

In Korea, where every nuclear plant is operated by the same company, using standardized practices and processes, the lifetime capacity factor for the CANDU fleet is an outstanding 92.2 per cent.

In China, where Canada has recently completed a very successful project, the CANDUs have an average lifetime capacity factor of 89 per cent compared to about 80 per cent for other reactors.

Time is of the essence if we are going to meet our future electricity needs, and CANDU 6 has already been licensed by the Canadian Nuclear Safety Commission. CANDU 6 or single unit equivalents of the 900MWe Darlington are a proven safe, clean, reliable and affordable solution that is ready to fill Ontario's looming electricity supply gap in the shortest possible timeframe.

Prompt construction - on time and on budget: AECL has designed, built and delivered six CANDU 6 reactors overseas in the last nine years - all on or ahead of schedule, and on budget. In fact the first unit in China, at Qinshan, took only four and a half years from first concrete to in-service, making it a record for power reactors built in China. This project has been praised as the best nuclear project in China by the Chinese government, and for good reason.

Those international projects have benefited our Ontario based industries tremendously and helped to keep them viable, efficient and ready for additional projects here at home.

Local and national economic benefits: Nuclear energy in Canada is a \$5 billion/year industry, providing employment for more than 30,000 people in more than 150 companies. Here in Ontario, the economic benefits of a new CANDU project are tremendous.

Additional system security costs: Ontario's electrical grid is set up to handle the size of power plants currently on the system, which makes adding more CANDU stations the logical choice. Reserve capacity (capacity that is over and above the normal demand on the grid) is determined, to a large extent, by the size of the largest unit on the grid since the grid must be able to provide that capacity should a unit go off-line.

Ontario needs to implement every possible conservation measure and install all renewable energy supply options. Even then, we will face a looming gap in base load supply of electricity that has

serious economic implications for business and residents. CANDU is a key part of the future solution.

We need to immediately begin a full environmental assessment of the CANDU option and the suitable sites across the province.

Ontario's private sector is ready to work with AECL and its shareholder (the government of Canada) to design, build, finance and operate new CANDU plants here in Ontario.

We are confident our superior performing technology, combined with our proven "on time, on budget" track record and the economic benefits to Canada, will make the CANDU option the obvious choice for meeting Ontario's future electricity needs.

Martyn R Wash is general manager of the Organization of CANDU Industries