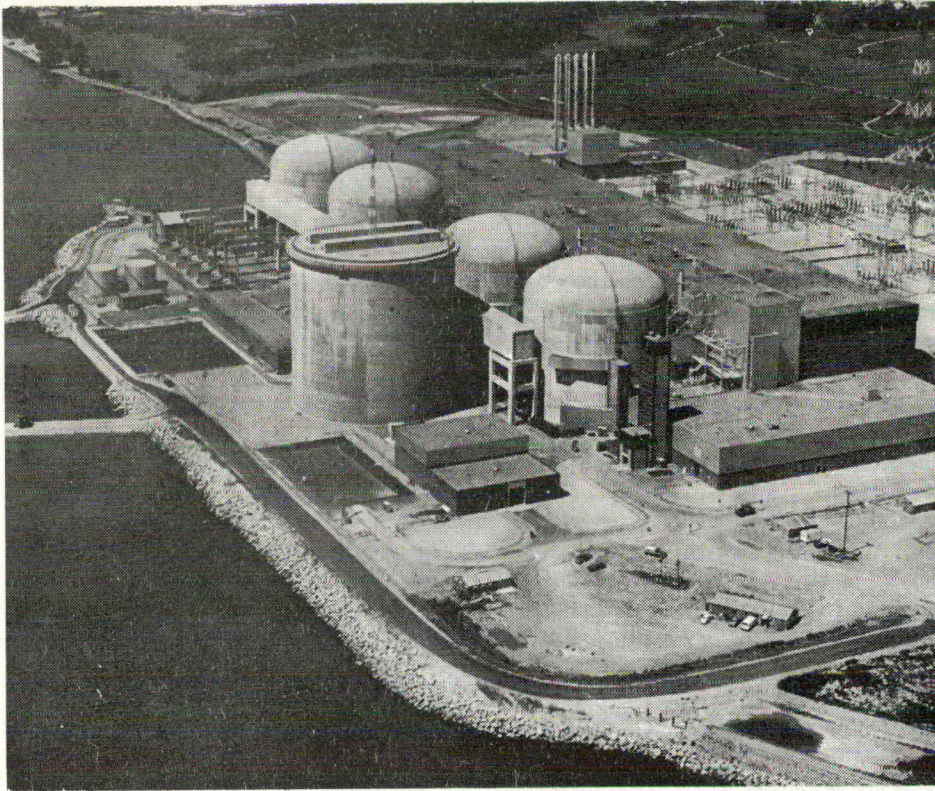


Aerial view showing the Ontario Hydro nuclear plant at Pickering, near Toronto.



Candu nuclear reactor may fill Britain's power needs

The system used to produce electricity in the world's largest fully operational nuclear power station, at Pickering, near Toronto, Ontario, has been the subject of interest in Britain recently.

Atomic Energy of Canada Ltd (AECL), the federal Crown corporation responsible for the construction of the

Candu system (Canadian Deuterium-Uranium) has put forward a strong case to the British Government for its use as the main reactor to supply Britain with its power needs.

Its advantages include an efficient design that makes full use of the technical possibilities for nuclear fission and — because natural uranium is

used — eliminates the expensive process for enriching uranium used in light water, and gas-cooled reactors.

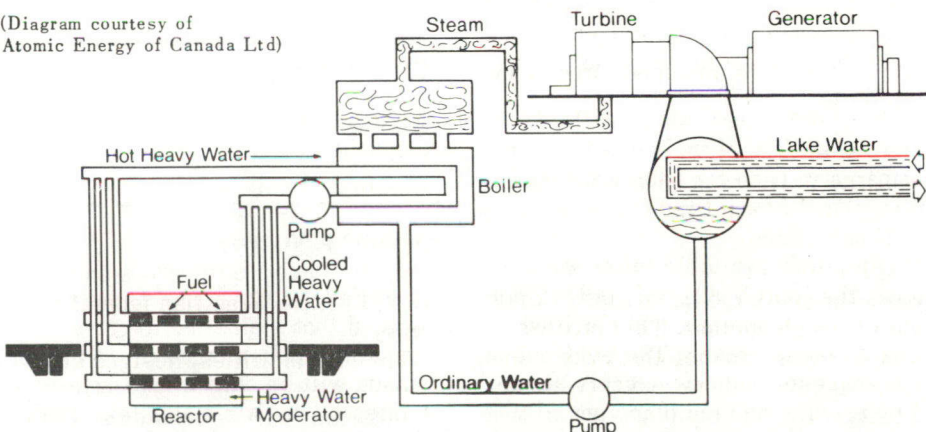
However, the Candu reactor does require heavy water as well as uranium. Alternative systems need only fuel, thus leading to the contention that Candu reactors have a higher capital cost than enriched systems. Nonetheless, AECL say that within a few years after start-up, savings in the cost of fuel for the Candu more than compensate for any difference in cost — particularly when taken over the lifetime of the station.

Although a United States-designed light water reactor is also being contemplated AECL officials have been promised that the Candu system would be very seriously considered.

The Pickering plant, operated by Ontario Hydro, has proved to be a commercial and technical success and will double its generating capacity to 4,112 megawatts with the installation of four more Candu reactors. Since entering full production the station's four 514-megawatt reactors have operated for long periods at 90 to 99 per cent of installed capacity, which is well above average. In one month last year, the station fed more than 1,000 million kilowatt hours into the Ontario power grid.

International confidence in the Candu reactor is growing. Purchases worth \$470 million have been made by the Argentine and by South Korea, with other countries now considering the system.

(Diagram courtesy of Atomic Energy of Canada Ltd)



This simplified diagram shows how electricity is generated by the Candu natural uranium reactor. The natural uranium fuel in the reactor heats the

heavy water, which in turn heats the ordinary water. The steam from the turbine, which drives the generator, produces the electric power.

Energy Ministers visit London

The federal Minister of Energy, Mines and Resources, Donald S. Macdonald, accompanied by the Ontario Minister of Energy, Darcy McKeough, Lorne Gray, President of Atomic Energy of Canada Ltd and other Canadian officials, were in Britain during the week of February 4 for discussions with Prime Minister Edward Heath and British Ministers regarding the possibility of collaboration between the two countries in the construction of nuclear power reactors.

A full debate by the House of Commons, which has been delayed owing to Britain's general election, will be held before a final decision is made.