

*Candu Reactor Sales*

sounds politically good, whether it be the last government or the present government.

Because I am referring to June, July and August of last year, obviously I am not pointing the finger at the present government. But I feel we must clarify this particular point. We must tell AECL that its job is to try to increase the export market to give us more jobs in Canada. It is an area in which we have the expertise. It is an area which provides the type of high technology employment that is beneficial to Canada. I do not believe impediments of any kind should be put in the way of this company in its negotiations with any country, unless we set up in advance the standards by which that other country is supposed to operate. Then I suggest that probably we will be cutting off two-thirds of the world's countries.

I hope I have made my point. I do not intend to pursue this motion through to its logical conclusion, but I plead with the present government not to fall into the same pattern as the past government and, by indirect action, interfere with the free operation of a Crown corporation which, in the fashion it is set up, is supposed to be independent of government interference.

**Some hon. Members:** Hear, hear!

**Mr. Roy MacLaren (Parliamentary Secretary to Minister of Energy, Mines and Resources):** Mr. Speaker, I have listened with attention to the statement of the hon. member. I have noted that a number of the issues which he raised will be under consideration in the nuclear review which the government has undertaken. I can assure the hon. member that the points he made will be fully taken into account in our consideration of the ways in which the nuclear industry in Canada can best be further promoted and developed in the future.

In entering this discussion this afternoon, I thought it might be useful if I were to say a word first about the ways in which the nuclear industry in Canada has developed, before turning to the future possibilities that are open to AECL and the private sector in this important area of our high technology industry.

As members of the House will recall, Atomic Energy of Canada Limited and the current nuclear industry originated in the military programs launched during the Second World War. Research and development activities on the peaceful use of nuclear energy have been funded by parliamentary appropriations since the very start of atomic research in Canada.

In 1952 AECL was formed when the assets of the Chalk River wartime research project, along with those of the commercial products division of Eldorado Mining Ltd., were transferred to the newly formed Crown corporation. From a starting complement of about 1,300 employees in 1952, AECL has grown to close to 8,000 employees. Today the corporation has major facilities at Chalk River in Ontario, the Whiteshell nuclear laboratories in Manitoba, the power project engineering, design and development facilities near Toronto, and a successful radioactive isotopes commercial products operation in Ottawa.

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Also, AECL has heavy water production plants at Glace Bay and Port Hawkesbury in Nova Scotia and a partially constructed heavy water plant in La Prade, Quebec, as well as its corporate headquarters here in Ottawa. The Canadian nuclear industry today directly employs about 30,000 people. It is estimated that a further 50,000 jobs are generated indirectly.

The majority of jobs directly related to the Canadian nuclear industry are of a highly skilled nature. For example, in the nuclear manufacturing sector, the level of professional and technical employment is approximately four times the Canadian manufacturing average and double the electrical product industry average. AECL has developed as the linch pin of this industry providing, on the one hand, the coherent, specialized, technical basis of the industry and, on the other hand, the marketing and export of nuclear power systems in various forms.

Alternative industrial structures have been considered from time to time and remain a major subject of review. The value of Canadian goods and services in a single exported 600-megawatt station can range up to \$300 million. Additional opportunities for Canadian industry often exist in the provision of support facilities and infrastructure.

The tangible results of AECL's efforts are perhaps most readily seen in the province of Ontario. Having foreseen the early exhaustion of its hydraulic resources for electricity generation, and having limited indigenous fossil resources and a sufficiently large grid, Ontario made an early commitment to a nuclear program. In 1978 Ontario received 30 per cent of its electric energy from nuclear sources. Installed capacity is now about 5500 megawatts and a further 8500 megawatts are under construction. Quebec has an installed nuclear capacity of 250 megawatts with a further 600 megawatts under construction. New Brunswick, as hon. members of that province will be aware, also has a 600-megawatt unit under construction at Lepreau.

The technical success of the Candu reactor is evidenced by a comparison of the measured gross capacity factors of the western world's nuclear power stations. In 1978 Ontario Hydro's units occupied five of the top 12 positions. On a lifetime comparison basis, these same units occupy five of the top seven positions. The unit energy cost of electricity produced at the Pickering nuclear station is about half that from the comparably sized and contemporary coal-fired Lambton station and has the additional benefit of major savings in foreign exchange.

The Candu reactor has proven to be a dependable, safe and economic source of electrical energy. Its continued role has received recent support from the Bayda royal commission in Saskatchewan, the report of the Porter Royal Commission on Electric Power Planning in Ontario, and the select committee on energy of the Ontario legislature.

The United States nuclear physicist and Nobel prize winner, Hans Bethe, has called the Candu reactor a technical wonder