Candu reactors by Canadians as the result of strict adherence to nuclear safeguards by this country without similar commitments by other nuclear exporting countries.

My question specifically asked what steps Canada has been taking through the International Atomic Energy Agency in Vienna to upgrade international standards to those of Canada, ensuring that the sales be used for peaceful purposes only and thereby giving Canada a more competitive position in Candu sales.

This question is raised by the fact that Canada has been instrumental in developing a very special nuclear reactor system named Candu. Candu has been developed rather slowly compared with most competing systems and with the utmost regard for the economics of power production and safety. It offers the possibility of clean, minimally-polluting power on a large scale at least for the next 50 years. During this time the fossil fuels of oil, natural gas, and coal will become gradually exhausted. It will give the human race a breathing space in which to make long-term plans.

Nuclear power need not cause any chemical pollution. The radioactive products of a fission reactor can be entirely contained in principle. The one genuine objection to nuclear power is the manufacture of plutonium.

The significant feature of various Candu reactors is that they function on fuel containing natural uranium. Most other commercial power reactor systems require enriched fuel; that is, they require the addition of separated uranium-235 or plutonium. Ours uses heavy water as the moderator, conserving neutrons. A great deal of thought and expense have gone into isolating from the outside world the system in the Candu reactor with a heavy concrete vault which has a special built-in huge vacuum mechanism to extract excess steam in the event of any serious leakage. Many other safety features are incorporated and are too technical to detail.

The reactor is acknowledged as technically superior to almost any other in the industrialized world. It should, therefore, be highly marketable and one on which a profit should be realized, instead of requiring repeated federal financial assistance for continued operation.

Since 1945 Canada has played a significant role in defining the international regime which has set up rigid safeguards and standards to eliminate the use of atomic energy for destructive purposes and to promote its widest use for industrial and humanitarian purposes, as per the Declaration of Atomic Energy of November, 1949.

Since 1955, it helped to organize the International Atomic Energy Agency which came into being in 1957, Canada has been on its board of governors since that founding date.

In 1974, when India detonated its "peaceful nuclear explosion", the Canadian government suspended nuclear co-operation with India and the government announced more stringent non-proliferation safeguards covering the export of Canadian nuclear and special material. Since that time the conditions established by this policy were applied to all contracts for nuclear exports, current and future, accepting full-scope safeguards. The government also made clear that it would end nuclear co-operation with any state which exploded a nuclear device.

Thus, by 1976, Canada developed the most far-reaching national safeguard of any nuclear supplier, a policy that went well beyond any other state at the time and beyond that subsequently agreed to in the nuclear suppliers group.

With this preamble, I again direct my stated question to the Parliamentary Secretary for the Secretary of State for External Affairs (Mr. Duclos).

• (2215)

[*Translation*]

Mr. Louis Duclos (Parliamentary Secretary to Secretary of State for External Affairs): Mr. Speaker, first I would like to comment briefly on the hon. member's statement that our sales of Candu reactors to foreign countries are not as good as they should be because our requirements, with respect to nuclear guarantees, are much more stringent than those of other exporting nations. Mr. Speaker, competition is fierce on the nuclear technology international market both for uranium and for the nuclear reactors themselves.

When Canada tries to sell its Candu reactors on this purchasing market, it is with the knowledge that the decision of a prospective client country will rest on a whole series of factors, including the nature of the technology offered, the financial terms, the opportunities for industrial participation and supply diversification and, foremost, the over-all political and economic objectives of the client country. The supplier's policy of non-proliferation and his nuclear guarantees is but one of many factors. Each one of those factors will have a different significance as dictated by the market and it is fair to say that none is likely to have a determining influence.

Mr. Speaker, Canada's nuclear export policy can be summed up as follows: Canada is seeking to export its uranium and its nuclear technology, making sure at the same time that those exports do not contribute to nuclear proliferation.

To meet this last objective, Canada has developed a comprehensive policy of non-proliferation and nuclear safeguards to promote implementation of a more effective non-proliferation international system and to minimize the risk of Canadian nuclear products being put to improper use. When this policy was implemented in December, 1976, the Secretary of State for External Affairs recognized that it was more advanced than that of other suppliers and he stated that Canada was willing to accept all the economic effects that would result from its unequivocal support of nuclear non-proliferation.

To come back to the question asked by the hon. member, during the seventies, Canada made considerable efforts to convince the other nuclear technology supplying countries to implement similar non-proliferation and safeguard policies. We have had considerable though partial success within the