

Interim Supply

the students, and we had the know-how relative to the operating of reactors of unrefined uranium.

To build these reactors, to make them cheap enough, and to make the electricity which flowed from them cheap electricity, competitive with thermal electricity, what we needed was cheap deuterium, because deuterium is a large factor in the cost of building a reactor of this kind. If we did not have cheap deuterium, then the cost of the reactor would be expensive, and the electricity which flowed from it would, as a consequence, be expensive power and not competitive with thermal power.

First of all, if we succeeded in building a plant which produced cheap deuterium we then had an opportunity as Canadians to sell deuterium abroad—and not only that, but to sell reactors and the whole technology of reactors, in the same way that today some Canadian engineering firms are enormously competent in the design, building and installing of paper making machinery in countries all over the world.

This presupposed that to have an industry like this, a national industry, an export industry, we would seek wherever we could in Canada to find the cheapest possible source of power to extract the deuterium we needed. Where would you go for such power? Well, you could go to gas wells. There are gas wells on the prairies, for example, which are so dirty that they have wet gases which have to be cleaned from the wells before the gas can be used for domestic purposes. This makes it almost an uneconomic proposition from the business point of view; but it is burnable gas, and when used in an industrial project of this kind is about the cheapest kind of power you could find.

Then there are several ways of getting very cheap electricity. For example, there are the open coal pits, or strip mines, where the cheapest kind of coal can be obtained and burned for the purpose of extracting deuterium from the water. But what puzzled me, and I am not an authority in these things, was that I found that the contract had been let to a company which would put down its plant on one of the most expensive sources of fuel in Canada. I can only think that, having done so, the cost of producing deuterium in this country is not likely to be an economical cost, or a cost which will make it desirable for Canadians to enter the export market in this new scientific field on a large scale. Therefore, to follow up the advantage and the knowledge we have in the nuclear field of raw uranium reactors, we have put into Canada an enormous amount of money. A great many millions of dollars has been

[Mr. Deachman.]

put into the building up of this nuclear technique and in acquiring the skills we have. I can imagine that we are about at the stage where benefits will flow from this investment. Therefore I hope I am mistaken when I see a deuterium plant put down on an enormously costly source of fuel, rather than on the cheapest source of fuel to be found in the country. I hope that is not in the long run to be the way we extract deuterium, although certainly on the surface it appears that it is.

I earnestly feel that there are profits to be made in Canada in the very near future in the nuclear field from the know-how we have accumulated. Having given this brief explanation of our costing methods and our capacity to compete in business, I hope the committee will be mindful of the advantages that we as a nation have in this field, rather than considering it merely an unprofitable venture and constructing plants, letting contracts and engaging in further work in nuclear physics in ways which are uneconomic. We have gone through that stage and have now acquired the know-how. Our task in the future must be to make this thing pay. I hope the government will move in that direction, and make it a paying proposition instead of a burden upon the Canadian people.

Mr. Fairweather: Mr. Chairman, as I listened to the last speaker I could not help but wonder whether he had given the Minister of Industry the benefit of his advice. There are, of course, many reasons other than cost which I presume were in the government's mind when they selected Cape Breton island as the location for this new plant, not the least of which would be the reason that it is an area of high unemployment. Presumably such location would also follow the government's much heralded plan for regional development.

However, I am not going to get into this field, in which I am not competent to speak. I have one or two things on my mind and I am going to take about ten minutes to get them off my mind. In his statement to the federal-provincial conference last week, the Hon. Duff Roblin discussed what he called a crisis of priorities. This is an apt phrase, and I want to develop it in so far as federal aid to university education is concerned. This is an area of our contemporary life which is rapidly reaching crisis proportions and one to which I do hope the new government will give its early attention. The much heralded Liberal party scholarship plan will be useless if the universities cannot accommodate those in receipt of these scholarships.

Last May the Canadian universities foundation presented a brief to the Prime Minister. To date the government has made no announcement of its intentions. The brief is a