

Interim Supply

[Text]

Mr. Pickersgill: I hope we will let the hon. gentleman finish.

[Translation]

Mr. Pigeon: Mr. Chairman, the Minister of Public Works talks about speeches and action; I wonder how it happens that the President of the Privy Council spends his time travelling across the country making speeches every day. It seems to me that the minister's language is rather illogical.

Mr. Choquette: He does not make speeches, he advocates action.

[Text]

Mr. Deachman: Mr. Chairman, I listened to the remarks of the right hon. Prime Minister, and others in this debate, on the subject of equalization with a great deal of interest because I am very mindful, coming from one of the provinces on the extremity of confederation, of the necessity for equalization in cementing confederation. I am also mindful however that equalization and our capacity as a nation to make payments on equalization are based upon taxation.

I am also mindful that taxes in return must be taken from the people and the corporations which earn the money to pay them, and in turn taxes cannot come at optimum levels unless first there are profits, and profits come from efficient and competitive industry wherever it is found in Canada. It was for this reason I was a little astonished yesterday when I learned that a company, which would be located in an area which I really doubt has the capacity to produce its product economically, has been awarded a contract to supply deuterium to the Canadian government. Hence, when we discuss the question of equalization, this poses the question as to whether or not taxes will ever flow to the Canadian government from that plant, for the purpose of participation in equalization.

To understand this, perhaps I had better go back a little bit and explain what the position of Canadian industry and the Canadian people is, relative to a plant such as a new deuterium plant to be established in Canada. We got into nuclear science during the course of the war, and subsequently, and grew up to be possibly the only country in the world with a nuclear capacity large enough to build a nuclear bomb, if we wanted to. We decided however that what we would do with our nuclear capacity, and with our scientists with nuclear knowledge, was to engage in peacetime pursuits.

We followed a course in this field somewhat different from that followed by the United States and other nations working along the path of developing the science of nuclear

physics. In particular we chose to build a reactor in this country which burned unrefined uranium. This was a very valuable thing in its way, because to refine uranium, first of all you must have a whole new industry, a uranium refining industry, and this is quite an expensive industry.

The United States on the other hand took the other course and built reactors which burned refined uranium, and also built themselves uranium refining plants. We moved along the course of developing our raw uranium, or unrefined uranium reactors, for some considerable time, and it was not a particularly profitable venture in physics. We were considered to be the Cinderellas in this business, and to have made a mistake in the direction we took.

There was another factor in these reactors which was rather strange too, and in which we were pioneers, and this was in using heavy water as a modifier to check the radiation of a reactor down to usable levels; and as deuterium is really a form of heavy water it could also be used as a cooling agent. So, it served two purposes,—as a modifier for our unrefined uranium reactors, and as a cooling agent to cool the heat of the reactors.

The United States had experimented along this line, but it was not the main line which they followed. They had made some deuterium, and I may say that deuterium is made relatively simply in a chemical plant, somewhat similar to a cracking plant that you find at an oil refinery. It is made by applying vast quantities of heat to water, in conjunction with sulphuric acid, and out comes deuterium.

As I say, the United States had made some at considerable cost, pretty much upon an experimental and not upon a commercial basis. As time went on, and as people in this country began to realize that the cost of building reactors was coming down, we were getting to a point at which reactors could be built at costs comparable to electricity generated thermally in areas where there was no available hydroelectric power, and it was realized that we could actually get into the business of building power reactors on a commercial scale.

Also, in having some skill in this field it looked as if Canada was on the verge of coming into a new industry, an industry in which we Canadians had built a particular skill and had some scientific knowledge not available in the rest of the world. We were a leg up; we were on the march towards doing something in which other nations, even with high skills and technology, would have a difficult time competing with us. We had a particular advantage in that we had been