

Fundy Tidal Power

to grips now in Canada and the United States. Another attractive aspect of fusion reaction is that there are no weapons byproducts. This is a problem we deal with in this House; how to have safeguards against the abuse of weapons byproducts of nuclear fission reactions.

If we can agree that the long-term goal rests with fusion, then the rest of the problem is how to fill in the 25 years from now to the year 2000 at which time fusion will be supplying most of our energy. The traditional sources of energy will supply the bulk of our requirements, this energy being derived from oil, natural gas, hydro-generated electricity, coal and nuclear fission. The stopgap measures which will help supplement some of these dwindling supplies of energy are energy or fuel derived from the tar sands as well as energy derived from oil in the Mackenzie Delta and in the Arctic.

These have to be looked at in the time frame as well as the money frame. Billions of dollars are needed, as we have heard, just to operate the Syncrude product which is just one of several tar sands projects being contemplated. To get the proven oil from the Mackenzie Delta down the Mackenzie Valley by pipeline will cost about \$5 billion for the first pipeline, and other pipelines are being thought of. To get the natural gas and oil from the Arctic Islands by pipelines, which will involve new technology because they go underwater, will also involve billions of dollars. We have a problem of time and money which we have to put together in a 25-year context. Ancillary sources to be investigated, but which are unlikely to play a major role, are energy derived from the sun, wind and tides. Wind is a form of sun energy—

Mr. Coates: Wind is what you have been producing since you stood up.

Mr. Maine: Wind is the direct result of the sun's energy being transmitted to the earth, heating up the air and forming differences in the surface temperature of the earth. Winds are created to somewhat equilibrate this. These three forms of energy are being looked at but are not deemed to provide a large amount of energy in the short term. Solar panels have been used in space and are being used in certain parts of the world. In Japan right now they have parabolic mirrors as a source of energy for heating the bath water, one of the few areas where solar energy is being utilized commercially. Solar energy is being looked at very seriously and is being contemplated in Canada. Historically, we have had windmills, but recent developments at NRC have used turbines with increased efficiency.

The third major form is tidal power. There are two or three aspects of this, but they have to be put in proper context with the other forms of energy. It is in this framework that the Bay of Fundy tidal power is being studied and will come to its final conclusion in due course.

Mr. Robert Muir (Cape Breton-The Sydneys): Madam Speaker, I am pleased to have this opportunity to say a few words on the motion of the hon. member for Cumberland-Colchester North (Mr. Coates).

[Mr. Maine.]

● (1730)

The hon. member who preceded me talked about the wind, the sun, nuclear power, and other things which had nothing to do with the motion before the House which reads, in part:

... the government should give immediate consideration to the undertaking of any further investigations required to develop the information necessary to undertake construction of the dams that will harness the tides of the Bay of Fundy for power, in partnership with the governments of the province of Nova Scotia and of the province of New Brunswick, and using the Canada Development Corporation as the agency for financing the undertaking.

I always thought the Canada Development Corporation was established to help the development of ventures beneficial to Canada. You know, the last speaker was so carried away with ideas about atomic energy and nuclear power that I wondered if he had been drinking heavy water.

Let me give some background. Ever since 1957 the hon. member for Cumberland-Colchester North (Mr. Coates) has been speaking both in this House and outside in public forums, about Fundy tidal power, and speaking about it as often as possible. In the past those in authority would smile and look askance if you talked about tidal power. Everybody thought the concept was out of this world, was not reasonable, not practical. But the hon. member was not discouraged and, as I say, has been pursuing this subject for many years. Now, all of a sudden we find that learned people throughout the world are interested in tidal power, particularly because we are experiencing an energy crisis. At least our government and other governments tell us this. So it might be useful to recall some of the people who, in the past, favoured the production of power from tides.

Going back some years we find that one of the people who favoured turning the dream of tidal power into reality was Michael Wardell, who published the Fredericton daily *Gleaner* and the *Atlantic Advocate*. Another was hon. Hugh John Flemming, who supported tidal power development when he was premier of New Brunswick. His close association with the right hon. member for Prince Albert (Mr. Diefenbaker), when the right hon. member was prime minister, resulted in the establishment of the Atlantic Development Board, which investigated the possibility of turning the dream into a reality.

Then came a change in government in New Brunswick. The government headed by Hon. Louis Robichaud favoured tidal power, and it was the Chignecto committee report on this question which, with the backing of Premier Robichaud, gave credibility to the idea of harnessing the tides.

In addition the idea found favour with leading members of the business community. K. C. Irving made numerous proposals, as did Les Kirkpatrick, the president of Nova Scotia Power Corporation, and people involved with the Nova Scotia Light and Power Corporation. They all supported this concept.

As times changed, people's opinions about the feasibility of Fundy tidal power changed. The idea is more widely accepted now. Today, both Premier Regan and Premier Richard Hatfield are in favour of developing tidal power. It should be noted that Premier Gerald Regan of Nova Scotia has pressed with vigour, both at home and abroad,