

population. I am not speaking against the aluminum industry, or the Kittingmat development, which produces 500,000 tons. That is a very wonderful thing, because that power was not much good for anything else. But, on the Columbia river, and the lower mainland, their economic future is in fisheries. So, without looking at it from solely a fish standpoint, or a biased standpoint, it depends on the effect of general industry, and that includes fish.

If you can get the Columbia river development, by agreement, isolating it from all of these international ramifications, then everyone will be willing to develop the Columbia river, and to bring the power to wherever it is needed—whether it is to the Kootenays—to the lower mainland—or even Victoria. But, it is important that the agreement be settled, because they are going to need power.

Now, I am not going to suggest that either atomic energy or gas plants is the answer today, but I am going to say this; that if you read the technical literature of atomic energy, you will know that Canada and the United States are producing 30,000 tons of uranium a year now. In addition to that, they are building reactors and scattering them all over the United States. In another ten years you are going to have atomic power in the Northwest, and people will recognize it as a common thing. Then, if you have saved your fisheries on the Fraser river, they will probably be worth twice what they are today, and the people will be perfectly happy to pay another mill for power, or another two mills to maintain that fishery.

So, it is quite important that you meet the power needs now, and that you do not stop the development of British Columbia, or the adjoining regions—Alberta, for instance, but give them their power until this other development comes along. The only place you can provide it, without any large complication, is the Columbia river. You have got to have an agreement with the United States before you start that development, or you will not get any downstream advantages. That is human nature. I am an American, and I am speaking quite frankly.

Mr. STICK: Dr. Royal—

The CHAIRMAN: Has this to do with the power question?

Mr. STICK: Yes.

The CHAIRMAN: Mr. MacLean indicated he wished to be allowed to ask a question before.

*By Mr. Stick:*

Q. You say definitely in your view, that you cannot have power and salmon on the Fraser?—A. You might save much of the salmon run in the lower part of the river, but the salmon industry, as we once knew it, and the salmon industry as we know it today, cannot exist with power development on the main Fraser.

Now, we have the Kittingmat development on the Fraser watershed which is currently doing very little damage, and which produces one million horsepower. We hope that we can produce or allow the development of another 700,000 or 800,000 horsepower in another region of the Fraser off of the main river without seriously damaging the fishing industry.

When you put a series of dams on the Fraser, you will be interfering with the normal migration. You are dealing with fish, and all the ingenuity of man cannot teach a fish to swim over a vertical flow without hesitating, nor will it teach a fish to swim into water that has suddenly been lowered 10 degrees lower in temperature than that which he has an inherent ability to accept as normal. If for instance you lengthen the migration period of the Stewart lake race, which migrates a distance of 850 miles at a rate of 30 miles a day without eating, for three days it will seriously interfere with the fish's ability to