

former minister? Did they have any plan? Were they ignored if they did?

**Hon. Mr. Drury:** First of all, if you are trying to quote me, I did not say we had failed. I said that we feel we have achieved less success than we had hoped for. Next, the fellow you refer to, when you ask me if I am protecting somebody, is called Drury.

As I pointed out at the beginning, the last time I was here the talk was about incentives to achieve, in relation to a specific project, the purpose I have been discussing with Senator Carter. That, fortunately, turned out all right; but, as I say, we have not achieved the success we hoped for. There was a temporary increase in expenditure, which means an increase in innovative capacity, within the Canadian manufacturing industry following the initiation of these programs. That fell off, and is now recovering slightly. Recognizing this, we are now carrying out, and have been carrying out for some time, an in-depth review of all of these incentive programs, most of which are, of course, on the part of the Minister of Industry, Trade and Commerce.

**Senator Bélisle:** Thank you, Mr. Minister. Mr. Chairman, you were so kind as to permit me a supplementary, and I will not ask any more questions, although I could.

**The Chairman:** I am sure you will have the opportunity later on. Senator Lang.

**Senator Lang:** I will skip my preamble and go right to the specifics.

Mr. Minister, you referred previously to the Arrow program, the satellite program, and the CANDU program, which I presume were really scientific thrusts designed to meet certain specific Canadian needs. What specific Canadian needs do you now see as being foremost, that are amenable to a scientific solution?

**Hon. Mr. Drury:** Generally speaking, the larger one-word ones are communications, including the satellite aspect of that area, and energy.

**Senator Lang:** I notice in your brief, in Appendix C, you give case histories of major science policy initiatives, and under that heading we have an oceans policy. Is this the only major science policy initiative referred to that is under active pursuit at the moment?

**Hon. Mr. Drury:** Well, the oceans policy has been evolving. Canada has a longer coastline than almost any other country in the world, and consequently more ocean contiguous to it. Consequently, also, it has more resources to exploit, in the best sense of the word, relatively speaking, than other countries. We, as Canadians, have been, if I may so put it, rather absentminded about what the oceans could mean to us. This involves almost every field of our economic activity in the air above the oceans, on the surface itself—principally for transportation, but also for defence—the body of water itself, with its resources both of energy and the biosphere that it has or could have, and finally, the bed of the ocean and all that lies under it. So, in a sense, it is a whole new world, and the genesis of the ocean policy was to indicate the interest of the government on behalf of Canadians in this new world. This new interest called for action on almost every single front in the government. The Department of External Affairs is leading the program or operation to secure the assent of other countries to our controlling and administering something more than the three miles that hitherto we had

conventionally controlled and administered. To look at the exploitation of the resources of the body of the water within that area, which hitherto not much had been done about, the lead here is taken by the Department of Environment. In the business of transportation and the use of the surface, this principally concerns the Coast Guard under the Ministry of Transport, but also the development and the use of different kinds of vessels in this hitherto, so far as Canada is concerned, virtually unused environment. Finally, there is the exploration and subsequent exploitation of the sea bed, that portion of the earth's crust lying underneath the surface of the sea, and here the lead has so far been taken by the Department of Energy, Mines and Resources. So that what in fact started out by being described as the "oceans policy" in fact has become a new element of policy for the Department of Energy, Mines and Resources. It has become a new element of policy and preoccupation for the Department of Environment, and has become a new element and preoccupation for the Ministry of Transport.

**Senator Lang:** Is there any co-ordination among those four departments you have referred to where this program is concerned?

**Hon. Mr. Drury:** Yes, there is co-ordination, but this co-ordination is provided largely by the lead department in a particular sphere. When it comes to the establishment of jurisdiction and control, then it is the Department of External Affairs which takes the lead and, consequently, that is the department responsible for co-ordination. So far as the underwater part of the ocean is concerned, its exploration and exploitation, there the administration and control would come under the Department of Energy, Mines and Resources, and the co-ordination of activities with other government departments who may be involved lies with them. An overview of this is continuing to be taken by the Ministry of Science and Technology, but as this becomes a part of our operational environment, the special initiating role that MOSST had will tend to disappear and dissolve.

**Senator Lang:** You mentioned energy as being a prime problem for Canadians, and I do not think that anybody will disagree with you on that. What, if any, activity is going on in MOSST with respect to the development of a scientific approach to our energy problem?

**Hon. Mr. Drury:** What is currently being done is the development of a comprehensive program which is having its genesis in the Department of Energy, Mines and Resources. Here is where the greatest body of knowledge in this particular field lies and here is where you find the greatest awareness of the problems.

**Senator Lang:** Are they carrying out any specific mission-oriented research in energy matters?

**Hon. Mr. Drury:** They have established an office of energy research and development which is still relatively small. This office has put together an analysis of potential and possibilities, and has also put together a program of research to be carried out partly by the department, or elements of the department, partly by other government agencies, partly by universities and partly by industry. This program of research will be based on targets of, if I can put it this way, three levels of operation in specific fields. The first will be either production of energy, or increased production; the second is research and development; and finally, in some fields, the possibility of merely