

I do not, of course, refer in this exemplary way to programs of defence and so on, or even of an organization as large as the National Research Council. I am referring more specifically to the research projects of certain federal branch research agencies.

The Chairman: Such as the Department of Energy, Mines and Resources?

Dr. Horn: Yes, I could give that example.

We have suggested in our brief, Mr. Chairman, that such medium-size programs could be implemented more quickly than major national ones, and that they could be administered within existing facilities. We believe that there is quite an urgent need—and here again we must bring our own industry into it as an example—for this kind of program. We believe, Mr. Chairman, that a central, policy-directing agency, responsible for the statement and control of national, priority objectives will be strongly required.

It is, however, our view that central, administrative control of government funded research agencies or programs in industry or universities would not result in the most efficient overall process of research and innovation. With respect to industry, we believe that within the framework of a directive national policy or objective, industry itself will generally be in the best position to choose the nature and course of its research projects.

On the other hand, the co-ordination of research objectives must surely be held as one of the most important features of any future science policy and practice in this country. Again, whether this is a job for an advisory body or for a ministry with authority for the distribution of research funds, we are not prepared to competently suggest, though we would comment that we are not aware of any method for the effective and continuing co-ordination of research, other than one involving control over the distribution of the funds for its prosecution.

We would emphasize our opinion, Mr. Chairman, that for the achievement of more innovation there should be greater support, in both breadth and depth, of all phases of the innovation process in industry. The pilot plant and design and engineering phases, the developmental production problems, the modifications to manufacturing methods, the market research and marketing trials, together with the initial research activity which, in

practice, frequently must be made to continue, even into the manufacturing phase, add up to a weight of risk and expenditure which is often too great for a responsible company to accept, and their investment may be diverted elsewhere. We suggest that whatever plan, therefore, may evolve it will take into consideration these other risks and costly phases of the total innovation process. Thank you, Mr. Chairman.

The Chairman: Thank you, Mr. Bonus and Dr. Horn.

[*Translation*]

I now invite Mr. Jean-Marie Martin to make his opening statement. As you know, Mr. Martin is President of the Canadian Council on Urban and Regional Research. Mr. Martin.

Mr. Jean-Marie Martin, Chairman, Canadian Council on Urban and Regional Research: Monsieur le président and other members of the committee, my name is Jean Martin and I am the Chairman of the Canadian Council on Urban and Regional Research. I am accompanied by the following people who are members of the council, Mr. Beecroft, Mr. Dobush, former Chairmen of the council, Mr. Teron, a member of the Board and Mr. Armstrong, who is the Executive Officer.

The Canadian Council on Urban and Regional Research welcomes the opportunity to submit its views to the Special Committee on Science Policy of the Senate. We should also like the opportunity to appear before the Committee: to sketch research resources that should be called into play in facing unprecedented urbanization, as called for in your reference (a); to outline the structure we believe appropriate to support productive urban research, as called for in your reference (d); and to emphasize the steps needed to improve the linkage between available knowledge and common practice in our field.

[*Translation*]

Practically the entire research budget of the Council—over 100,000 dollars per year—comes from the Ford Foundation; however, neither they nor we regard this dependence as a permanent state of affairs. The cost of administering our subsidy programs, and of providing bibliographical and other services, has been met with the assistance of grants under the National Housing Act, which have averaged approximately 100,000 dollars annually. These receipts, together with the corre-