

operated and each has important research facilities; most particularly The Hydro-Electric Power Commission of Ontario has a large laboratory equipped to provide research services for all its technical activities and also to undertake both *ad hoc* and long-range research programs.

Industrial research has been slow to develop in Canada. While certain large industries, particularly the chemical industry and pulp and paper industry, had a long history of successful research effort, the primary resource base of other industries was not conducive to the establishment of industrial laboratories. Also, the prevalence of foreign-owned manufacturing companies exerted considerable influence on the development of industrial research. Canadian subsidiaries of foreign companies had ready access to the research and development results of their parent companies and Canadian companies had little incentive to establish their own laboratories or to develop products specifically for the Canadian market. However, Canadian industry in general is now developing extensive research facilities and becoming much more aware of the advantages to be gained therefrom.

There are no large profit-making research institutes in Canada although several laboratories are available to undertake consulting, testing and experimental work in technological and engineering fields. Nor are there many non-profit research institutes in operation. The Ontario Research Foundation is the largest of this type in Canada. It is a self-governing research institute that engages in research and development on contract for manufacturers, departments of government and on its own account. Although initially financed by an endowment fund subscribed partly from industry and partly from government, its current revenue is derived largely from sponsored research. The British Columbia Research Council operates in a similar manner. Co-operative research through research associations is likewise a minor factor in Canadian research activity. The Pulp and Paper Research Institute of Canada (see Forestry Chapter) is the only example of a major research association. This institute is supported by industry but, from the outset, has been closely associated with McGill University and for many years the Federal Government provided a grant which was five years ago replaced by the construction and equipping of a laboratory for the use of the Institute; in the fall of 1963 it was announced that the Federal Government would make available \$3,000,000 to extend these laboratory facilities to meet the increasing demands of the pulp and paper industry for more advanced and diversified research essential to the maintenance of its competitive position in world markets.

Thus, there are three main sectors of research in Canada—government research, university research and research in industry. These three elements are covered in some detail in the following Sections and Subsections.

**Mechanism for the Federal Science Policy.**—In the federal sphere, the ultimate authority for policy on science resides in the Cabinet. To exercise this authority there was established by the National Research Council Act (RSC 1952, c. 239, as amended) a Cabinet committee known as the Committee of the Privy Council on Scientific and Industrial Research. This Committee comprises those Cabinet Ministers having departments with scientific responsibilities and certain other Ministers who have an indirect concern with scientific affairs. The executive departments and agencies advise the Privy Council Committee on the scientific aspects of their own departmental responsibilities and on the organization and support of research required for their own purposes. The National Research Council, on the other hand, advises the Committee on general science policy, particularly on research in the universities, in industry and in fields not specifically the responsibility of the executive departments or agencies.

In 1949 the Privy Council Committee broadened the structure of its advisory mechanism by the addition of an advisory body of senior officials to which it might turn for joint advice on the formulation and conduct of government scientific policies. Thus the Committee has now two advisory bodies—the National Research Council and the Advisory Panel. The Council, being composed of non-government scientists representing the universities, industry and labour, is admirably suited to keep the Committee informed of