OPPORTUNITIES FOR FEDERAL GOVERNMENT FUNDED RESEARCH IN WOOD PROTECTION

V.N.P. Mathur, Scientific Advisor, Forest Products

Canadian Forestry Service,

Ottawa, Ontario

The government of Canada has carried most of the responsibility for forest research since the latter was first undertaken seriously in the 1920's. In the beginning of this decade, the Canadian Forestry Service budgeted close to $50 million in supporting research and development activities related to forestry and forest utilization.

Since April 1, 1979, the forest products research has been shared with industry. Forintek Canada Corp. (Forintek), formerly the Forest Products Laboratories of the Department of the Environment, is a private corporation which conducts research on solid wood products, with approximately half of its funding from the federal government. Wood preservation research, which is part of this solid wood products research activity, is getting its due share of support under the federal funding at Forintek. The president of this Canadian Wood Preservation Association, Dr. Roger Smith, and several of his colleagues from Forintek, have presented papers to this group in the past and will continue to contribute papers based on the wood preservation R&D activity funded by the federal government.

Apart from the above discussed Canadian Forestry Service's funds allocation to wood preservation research, what are the opportunities for federal government funded research in the wood protection field in Canada? These opportunities fall into four main areas.

- Information and Services
- Financial Support
- Government Research and Technology Transfer
- Industry Research Facilities

Let us examine each of these areas as it relates to wood protection research and development in Canada. The Ministry of State for Economic Development publication "ABC Assistance to Business in Canada 1982-82" provides detailed information on these opportunities and I suggest to those seriously considering taking advantage of the federal program that they should obtain a copy of this publication.

INFORMATION SERVICES

A literature and "state of art" review is generally the first requisite to initiate a R&D project. You write to Forintek for such an information review on wood protection. Further, the National Research Council of Canada (NRC) can help and advise on technological or scientific problems relating to many facets of the business on a confidential and self-help basis through its advisory service. In addition to staff consultations, NRC's Technical Information Service

(TIS) can bring NRC's extensive knowledge to your door through its manufacturing science and technology service (which provides industrial engineering know-how by undertaking detailed in-plant studies at no cost to you) and through its technical awareness service (which keeps you informed of innovations and developments in your field of business).

The Canadian Institute for Scientific and Technical Information (CISTI) provides a more general library service at very little or no cost. CISTI will furnish regular reports tailored to your specific information needs.

Government testing and laboratory facilities are available to you if they are working on similar research activity to yours. The Department of Public Works allows access to its computer design tools, used in design and construction of buildings, bridges and marine installations.

The system of patents, trade marks, and industrial design registration provides protection to individuals or businesses for new products, processes, or designs they have developed; it also informs the business community of new developments. The Patent Office's public library provides information on Canadian and foreign patents and will sell you copies of any Canadian patent.

FINANCIAL SUPPORT FOR INDUSTRIAL RESEARCH, INNOVATION AND PRODUCT DEVELOPMENT

The Industrial Research Assistance Program (IRAP) administered by the National Research Council of Canada pays staff salary costs covering about 50 percent of the overall costs of selected research projects. This program aids Canadian companies wishing to expand through new product development, and provides financing to projects with high technological and economic payoff. From the initiation of this program, 18 wood protection projects were supported with 2.8 million dollars of federal funds and a couple of these projects are progressing at present.

The Mini-IRAP Program assists firms that are not large enough to maintain a separate research facility of their own, by paying the salaries of individuals in research organizations working on projects for business clients.

The Scientific and Technical Employment Program (STEP), under the NRC, subsidizes companies which hire unemployed scientists, engineers and technicians for new and significant initiatives. An extension of this successful program, called STEPEX, provides for unemployed research staff hired by universities and research institutes to carry out projects requested by private sector firms. Industrial Post-Doctoral Fellowships provided by the NRC share with industry the costs of employing highly qualified graduates. In present days of high unemployment, these programs could be highly beneficial to your business and the scientists.

The Enterprise Development Program (EDP), administered by the regional Enterprise Development Boards presided over by local businessmen, provides funds to small and medium-sized manufacturing and processing companies for high risk innovative projects. Up to 75 percent of the costs of approved projects are contributed by the government. Financial assistance for EDP proposal preparation and for industrial design costs is also available through the Department of Industry, Trade and Commerce.

Several tax incentives are also available to your companies, for example:

a) immediate full tax write-offs for all expenditure in Canada, including current and capital expenditures for scientific research in the year in which they were incurred;
b) a special deduction for increased R&D is allowed for 50 percent of the increase in the level of scientific expenditures over the previous three-year average, until 1988;
c) investment tax credit on current and capital expenditure, qualified according to the region of Canada in which the research is carried out.

GOVERNMENT RESEARCH AND TECHNOLOGY TRANSFER

The federal government has adopted a policy of contracting out as much of its science and technology requirements as possible to the private sector. An example of this policy is the transfer of the two Canadian Forestry Service Products Laboratories to private industry as Foritnek Canada Corp.

Numerous Canadian companies receive contracts from the federal government for research and development projects. The Science Centre of the Department of Supply and Services should be contacted for such R&D contracts. An R&D proposal related to government activity, where the expenditure of public funds in the private sector is required, may be submitted to the Science Centre's Unsolicited Proposals Program. The Science Centre administers the $15 million a year program. Several wood protection research projects have been funded in the past under this program.

Transfer of government-owned technology to the private sector is financed under the Program for Industry/Laboratory Projects (PILP). The PILP program is administered by the NRC in cooperation with the Departments of Agriculture, Communications, Energy, Mines and Resources, Environment, and Fisheries and Oceans. The PILP program provides companies with financial and other assistance to promote transfer to industry of NRC or government-owned technology and to develop its commercial application.

Results of research and development conducted under former Forest Products Laboratories and those developed under federal contracts, e.g. under CFS/Forintek contracts, qualify for the PILP program.

INDUSTRY RESEARCH FACILITIES

For many companies, especially those of smaller size, research can be prohibitively expensive. To alleviate this burden, the government has provided research institutes with seed money to enable them to provide you with research support on a fee-for-service basis through the following:

a) the Industrial Research Institute Program (IRIP) has established a number of university based research institutes which undertake research for, or provide technical services to industry;
b) Centres of Advanced Technology at universities and other institutions have been provided with facilities and staff capabilities to help you to remain technologically advanced in your field;
c) the government also intends to create up to five university-based Industrial Innovation Centres to aid industry in developing and commercializing new products and processes.

The above is a short description of several federal government funded research programs in Canada. For further details on individual programs, you may contact the various federal departments or the Canadian Forestry Service directly and we will try to do our best to assist you in giving you the pertinent information.