



**News Release
from
House of Commons
Standing Committee on Industry, Science and Technology**

**Study on Canadian Science and Technology
Ottawa, March 18, 2008 -**

On February 7, 2008, the House of Commons Standing Committee on Industry, Science and Technology adopted a motion to conduct a study into Canadian science and technology.

Science, research and development underpin Canada's position in the knowledge economy, where strength depends on capacity to innovate and stay ahead of the technological curve. Canadian government policies have aimed to foster world-class research programs in universities and research institutes and to encourage business investment in research and development. The 2007 science strategy "Mobilizing Science and Technology to Canada's Advantage, reiterates these goals.

The Committee believes that it is important to hear from Canadians on this topic. Its aim is to hear witnesses representing a variety of sectors and regions in Canada. The Committee will also be accepting briefs on this topic from groups and individuals who will not have the opportunity to appear before the Committee.

The Committee welcomes briefs on the themes of:

1. Science advice to government;
1. Commercialization, venture capital and intellectual property;
1. Federally funded research performed in government and higher education; and
1. "Big science" projects and Canada's position in global science and technology.

In order to present a brief to the Committee on this topic, the document must be submitted to the Committee's mailbox at INDU@parl.gc.ca by no later than 18 April 2008, and must be a maximum of 5 pages in length.

At the conclusion of the study, the Committee will present a report to the House of Commons outlining its findings and recommendations.

The Standing Committee on Industry, Science and Technology is composed of 12 parliamentarians representing four political parties. It is chaired by Mr. James Rajotte, M.P. for Edmonton-Leduc.

Canadian Federation of Biological Societies

A Brief to the House of Commons Standing Committee on Industry, Science and Technology

Study on Canadian Science and Technology

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Submitted on 16 April 2008

Executive Summary

The Canadian Federation of Biological Societies (CFBS) represents 11 national life science societies and associations with members from industry, government and academic sectors. The Federation is the voice of research scientists in a broad spectrum of biological and biomedical disciplines. The CFBS is also a member of the Partnership Group in Science and Engineering (PAGSE) and the Canadian Consortium for Research (CCR). The goal of CFBS is to promote the development of science and technology policies that will enable Canada to be competitive and meet the challenges of the 21st century.

The CFBS is responding to the invitation of the House of Commons Standing Committee on Industry, Science and Technology to hear from individuals and organizations to facilitate its study into Canadian science and technology in four theme areas. This brief will address issues under the four themes: federally funded research performed in higher education institutions and in government; Canada's position in global science and technology; commercialization; and science advice to government.

CFBS Recommendations:

- Harmonize the various components of the federally funded research enterprise at higher education institutions; i.e. better balanced support for top-notch personnel, students, training, infrastructure and fundamental, applied and targeted research
- Re-invest, in a systematic way, in government's own research infrastructure
- Increase investments in international science partnerships
- Speed up implementation of policies to enhance private sector investment in R&D
- Implement a mechanism for independent S&T advice to Government from the scientific community

Background

The Federal Government's S&T Strategy, Mobilizing Science and Technology to Canada's Advantage, recognizes the importance of science and engineering to our continued economic prosperity and quality of life. It provides a sound science and technology framework and the basis for policy decisions and investments by Government. The CFBS is in overall agreement with the directions set out in the S&T Strategy and with the implementation steps the Government has

announced in the Budget Plan 2007 and the Federal Budget 2008. The CFBS is especially pleased with the Government's initiatives to support higher education and to attract and retain top level personnel through the new Canada Student Grant Program, the Vanier Scholarships for doctoral students, funds to help Canadian students to study abroad, the Research Chairs Program and the new Canada Global Excellence Research Chairs. Over the past several years, the Government has significantly increased funding to the federal granting councils which has given a marked impetus to university research in Canada. However, in recent years, this funding has not kept pace with other initiatives introduced by Government and has been largely targeted to specific priorities. Although the identified priorities are important, the Government must take care with respect to the balance in funding for the whole research enterprise and to sustaining high-level funding for science and technology in Canada.

Research Funding

Higher Education Institutions

As stated above, the CFBS welcomes the Government's initiatives with respect to investing in the training, attracting and retaining of highly qualified personnel. Top-notch creative scientists are the backbone for an innovative and competitive industrial sector and for supporting the elements of "public good" (e.g. health, environment, safe food and water) that are essential to the high quality of life in Canada. However, to have in place the full spectrum of components necessary for effective innovation, there needs to be a balance between the funding of fundamental, applied and targeted research.

Our new generation of scientists needs the support to pursue creative ideas and open new lines of inquiry which will ultimately lead to new applications, technological innovation and market advantage for Canada. Basic, curiosity-driven scientific investigation provides the ideas, knowledge, data and skills that feed applied research. However, in recent years, increases in funding to the three federal granting councils, Natural Sciences and Engineering Research Council (NSERC), Canadian Institutes of Health Research (CIHR), and the Social Sciences and Humanities Research Council (SSHRC), have not kept pace with the much-needed increases in students and personnel in the university research community. In the 2008 federal Budget, the increases allocated to the granting councils were targeted to specific priority areas. These targeted areas are important. However, the money available to the granting councils for basic operating grants is stretched thin, with many excellent, highly-rated applications going unfunded. Those research proposals that do receive money are often funded at levels below the required amounts.

In addition to the situation with respect to operating grants for fundamental research, in spite of the modest increase in the 2008 Budget, there is also still a shortage of money for the indirect costs of research. This shortfall impedes universities from providing adequate infrastructure support to their research staff or forces them to divert much-needed funds from their undergraduate programs to fill the gap.

All-in-all, the Government should examine the whole of the federally funded research enterprise at academic institutions and harmonize its various components in order to have a system that functions with the utmost effectiveness for greatest impact.

Government Departments and Agencies

In addition to its support of university research, the Government must also re-invest, in a systematic way, in its own research infrastructure. Government departments and agencies perform research in specific areas of public good such as standard setting, food and drug safety, public security, response to pandemics, climate change and energy supply. It is of utmost

importance to have this essential, independent and high quality research capacity within government maintained and supported at adequate levels. The level of support has been gradually eroding over the last several years and the 2008 Budget was silent with respect to the needed reinvestment. It is recommended that the Government complete its on-going review of departments and agencies as quickly as possible and take concerted actions to strengthen its own research capacity in critical areas.

Partnerships in Global Science and Technology

Scientific research has become a very global enterprise, with individual scientists collaborating world-wide and working in research teams across the globe. This has great benefits in terms of sharing ideas, expertise, facilities and resources and being able to engage in large-scale projects beyond the capability of any one country. Canadian researchers have world recognition in many areas and are looked upon as ideal partners in international partnerships. However, in many instances, negotiations of partnership agreements prove embarrassing and break down because Canada does not have adequate dedicated funds to match financial offers for the collaborative effort put forward by other countries. The Federal Government is urged to increase investments in international science partnerships in order to claim "world-class excellence" as promoted in the S&T Strategy and to benefit from the added knowledge base offered by such R&D collaborations with other countries.

Commercialization

The current economic climate and the relative strength of the Canadian dollar have caused serious difficulties for Canada's manufacturing and exporting sectors. The Government has introduced some measures in the 2008 Budget to encourage innovation to create greater market advantage in the most vulnerable of these sectors. There are some modest changes also to the scientific research and experimental development (SR&ED) tax credit program to help companies with their R&D efforts. However, the Federal Government needs to provide greater incentives to encourage Canadian companies and multinationals within Canada to build greater research capacity within their own operations. This is clearly the goal that has been outlined in the Government's S&T Strategy. A strong national scientific research infrastructure and the availability of highly trained, creative scientific personnel will certainly be one of the foundations for greater private sector investment in S&T in Canada. Having a stronger in-house research capability within Canadian firms will increase their productivity and competitive advantage. It will also increase their receptor capacity for knowledge and technology transfer through partnerships with academic and government institutions for enhanced innovation and wealth creation for Canada. The S&T Strategy provides a framework and some policy commitments to improve the business environment and the climate for private sector innovation. It is imperative to conduct the reviews that were outlined in the S&T Strategy in an expeditious manner and to implement the right policies for the rapid and vigorous growth of private sector investment in R&D in Canada at levels above the OECD average.

Science Advice to Government

The Government's S&T Strategy outlined a new structure for obtaining S&T advice in a more integrated fashion, with a system of innovation approach, representing private, academic and government interests. The previous advisory bodies were replaced by the Science, Technology and Innovation Council to give advice to Government on S&T policy issues and to give regular assessments of Canada's performance with respect to other countries. The Council of Canadian Academies has the mandate to provide in-depth, independent, expert assessments of the state of science in areas of interest for public policy issues. Both of these bodies receive their work

assignments from Government. It is not clear at this point, how the scientific community can transmit its opinions and concerns effectively to Government on important issues that are outside of matters referred to the two advisory bodies for attention. It is essential that there be a mechanism for such proactive input to decision-makers by the scientific community if Canada is to remain at the forefront of rapid scientific advances and reap their benefits for innovation.

Conclusion

The CFBS welcomes this opportunity to present its brief to the House of Commons Standing Committee on Industry, Science and Technology. It congratulates the Committee on its decision to conduct a study into Canadian science and technology.

CFBS Recommendations:

- Harmonize the various components of the federally funded research enterprise at higher education institutions; i.e. better balanced support for top-notch personnel, students, training, infrastructure and fundamental, applied and targeted research
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