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Government Response to the Fourth Report of the Standing Committee on Industry

Productivity and Innovation: A Competitive and Prosperous Canada

Canada

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Productivity and Innovation:
A Competitive and Prosperous Canada

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Minister of Industry Ministre de l'Industrie

Ottawa, Canada K1A 0H5

The Honourable L'honorable
John Manley P.C., M.P. c.p., député

Ms. Susan Whelan
Chair, Standing Committee on Industry
231 Confederation Building
House of Commons
Ottawa, Ontario
K1A 0A6

Dear Ms. Whelan:

Pursuant to Standing Order 109 of the House of Commons, I am pleased to respond on behalf of the Government to the recommendations contained in the Fourth Report of the Standing Committee on Industry, *Productivity and Innovation: A Competitive and Prosperous Canada,* as tabled in the House of Commons on April 11, 2000.

I would like to thank you and the members of the Industry Committee for a solid piece of work, highlighting the importance of productivity and innovation to the Canadian economy. Indeed, the substance and tone of the Committee's recommendations reinforce the Government's current direction, and will assist us in further attaining productivity gains and innovation objectives.

The Government very much supports the priority your Committee places on improved productivity (outputs and indicators) and helping to create a business climate more conducive to R&D and greater innovation. These components for growth, along with a renewed commitment to the manufacturing and small business sectors, will go a long way to ensure prosperity and position Canada to an even greater competitive advantage in the future.

Yours very truly,

John Manley

Canada

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GOVERNMENT RESPONSE

CHAPTER 1 — CANADIAN PRODUCTIVITY AND INTERNATIONAL COMPARISONS

Recommendation 1

That the Government of Canada broaden its innovation agenda as set out in Budget 2000 with the objective of raising the business sector's productivity growth rates above the average posted by the G-7 countries on a consistent year-to-year basis.

Response

The Government recognizes that there is a need to continuously improve the growth rates of productivity in Canada's business sector in order to enhance its international competitiveness.

The main determinants of productivity are: the level of innovation; the accumulation of physical and human capital; and business environment. There are two types of technological innovation that are determined by different sets of factors: (i) fundamental innovation — consisting of the invention of new products or processes — is determined by investment in research and development (R&D) and the accumulation of human capital; and (ii) applied innovation — consisting of the use of existing products or processes in a new way — is determined by investment in R&D, the accumulation of physical capital (machinery and equipment), and the diffusion of innovation (locally and globally). Innovation takes place outside of the technological domain as well. In fact, according to Organisation for Economic Co-operation and Development (OECD), firms' expenditures on non-technological innovations in such areas as management, marketing, and distribution are much more extensive than those on technological innovations.

The Government's current Innovation Strategy — based on knowledge infrastructure, commercialization of knowledge, human resources, and business environment — will address all factors contributing to innovation and, thus, to productivity.

The Government believes that, by taking measures to enhance the innovation environment in Canada, the economic agenda set out in Budget 2000 should result in an increase in the business sector's productivity growth rate in the long run. The Government, however, will continue to develop new initiatives that may further contribute to this effort.

Recommendation 2

That the policy initiatives flowing from the Government of Canada's innovation agenda be designed to provide an advantage for the manufacturing and small and medium-sized business sectors.

Response

As the Committee points out, small and medium-sized enterprises (SMEs) in Canada are largely responsible for the increase in business start-ups and employment over the past three decades.

The Government therefore agrees that its innovation agenda should provide SMEs with policies, programs, and information to help them grow and prosper.

As noted by the Committee, realizing the critical role of SMEs in wealth and employment creation in Canada, the Government has instituted a number of new measures in Budget 2000 to support them. In addition to these measures, and some smaller projects funded under Technology Partnership Canada and the Industrial Research Assistance Program, mention should also be made of the following programs and services specially designed to assist SMEs:

(i) The Canada Community Investment Plan: a $20-million, seven-year program designed to improve access to risk capital by small and medium-sized growth-oriented businesses, primarily in small communities.

(ii) Innovation Loans: created by the Business Development Bank of Canada to help innovative businesses position themselves to take advantage of new markets and new technologies available to today's players. Qualified applicants can obtain up to $100 000 to develop foreign markets.

(iii) Revolving Loan Funds: established by Western Economic Diversification Canada with a focus on innovative arrangements with financial institutions to administer, on commercial terms, loan funds for key emerging industries to facilitate access to capital by SMEs in Western Canada.

(iv) Doing Business via the Information Highway — the Government On-Line initiative: a series of programs and services designed by the Government of Canada to help Canadians access services on-line. An example of such services is Industry Canada's Innovation Portal, which provides one-stop Internet access to Canadian information, expertise, and resources for SMEs to assist them in becoming more innovative. The portal also provides access to the Innovation Toolkit, a next-generation Internet diagnostic that help firms identify their needs and the best courses of action to improve their innovation performance.

Ongoing review will identify other needs in the future, and the Government will ensure that they will be addressed in a timely fashion in order that SMEs will be able to continue to develop and thrive in Canada.

CHAPTER 2 — PRODUCTIVITY IN INDUSTRIALIZED ECONOMIES: WHAT HAPPENED POST-1973?

Recommendation 3

That the Government of Canada design its industrial policies to stimulate business sector investment in physical capital, in particular machinery and equipment, with the aim of raising Canada's investment rate above that of the G-7 country average.

Response

Among the major drivers of productivity, investment in physical capital, especially in machinery and equipment, plays a key role. Furthermore, when measured as a share of Gross Domestic Product (GDP), investment in machinery and equipment appears to be strongly correlated with growth in productivity. This type of investment often embodies the latest technologies in production processes and, when coupled with a highly skilled work force and effective industrial organization, will lead to gradual improvement in productivity (output per hour worked) and eventually in the standards of living.

Although Canada has lagged behind in the level of machinery and equipment spending as a percentage of GDP relative to the OECD average during 1980–1996, more recent statistics point to an improvement of more than one percentage point of GDP in this indicator during 1996–1998. However, the Government recognizes the need to improve Canada's investment performance record in this key indicator and has recently articulated its policies in Industry Canada's *Report on Plans and Priorities* (*cf.* 2000–01 Estimates, Part III, p. 41), which will focus on:

> ". . . [improving] the domestic and international investment climate by adopting competitive, efficient and fair marketplace laws and regulations for both businesses and consumers [;] . . . strengthening the competition law; implementing policies to address investment barriers related to intellectual property, patent protection and risk management; harmonizing with other jurisdictions; promoting Canadian standards; and participating in bilateral, regional and multilateral trade and investment treaties . . . ."

Recommendation 4

That the Government of Canada in cooperation with the provinces and municipalities increase investment in public infrastructure in transportation networks.

Response

The federal government recently took steps to address the needs of the Canadian transportation network. On February 28, 2000, the Minister of Finance announced a $2.65-billion multi-year physical infrastructure program, which includes up to $600 million for strategic highway

infrastructure. Specifically, Budget 2000 allocated $100 million in 2000–01, $350 million in 2001–02, and $550 million annually for the next four years. Of the $550 million per year for the later years, $400 million will be allocated for municipal infrastructure in cities and rural communities across Canada (including affordable housing, green infrastructure, and local transportation), and up to $150 million for strategic highway infrastructure.

The new infrastructure program will, therefore, include both municipal and strategic highway infrastructure, and provide opportunities for the federal government to work in partnership with other levels of government. In particular, the federal government will work with provinces and territories to identify those parts of the National Highway System that, because of growing traffic and increasing trade, need immediate attention. This will result in a safer and more efficient highway system for all Canadians. Furthermore, the highway component will foster innovative techniques and multiple partnerships that will increase the efficiency and safety of the national transportation system as well as enhance its sustainability and reliability. The formal negotiation process for the new infrastructure program is expected to commence this summer and should lead to the signing of the federal-provincial-territorial agreements by the end of 2000.

Recommendation 5

That the Government of Canada improve data collection on productivity and its measurement in the services sector and communicate to Canadians the importance of productivity to quality of life.

Response

The measurement of productivity, especially in the services sector, is a complex and difficult task. The Government, including Statistics Canada, continues to look for ways to improve data measurement in this area. To illustrate, Industry Canada has two projects underway with leading productivity experts in academia in both Canada and the United States on improving the underlying methodology used to calculate productivity in the services sector. These projects are on the cutting edge of productivity measurement.

The Government is committed to continuing its efforts to inform Canadians of the importance of productivity to quality of life. For example, Industry Canada, the Department of Finance and Statistics Canada contributed funds and research work to the Centre for the Study of Living Standards January 2000 conference on productivity. Many government departments will be expanding our understanding of productivity by undertaking research over the next few years as part of the Policy Research Initiative's *Economic and Social Aspects of Productivity Project.* This project includes research on the role of social policies and programs in productivity. Research work under the Policy Research Initiative is being widely disseminated. Industry

Canada, in partnership with the Centre for the Study of Living Standards, will be holding a workshop on productivity in September 2000. In addition, Industry Canada has commissioned the Centre for the Study of Living Standards to produce a new journal on productivity. The first issue is set to debut this year. The journal will be produced twice annually and its contents will be current, covering all key aspects of productivity.

CHAPTER 3 — PRODUCTIVITY IN CANADIAN MANUFACTURING: WHAT WENT WRONG? WHAT WENT RIGHT?

Recommendation 6

That the Government of Canada ensure that the application process for research and development tax credits by small and medium-sized businesses is streamlined and made user-friendly.

Response

Since the Minister's Vancouver "Building Partnerships" conference, held in June 1998, the Canadian Customs and Revenue Agency (CCRA) has received feedback from SMEs and made substantial improvements in the administration of the Scientific Research and Experimental Development (SR&ED) program. SMEs have historically been and continue to be the largest portion of the SR&ED clientele. These businesses represent 75 percent of the approximately 11,000 claimants that annually utilize the SR&ED program.

CCRA now processes 82 percent of refundable claims from SMEs within the 120-day target. This is a significant improvement compared with two years ago, when 36 percent were processed within this target period. Some of the measures undertaken by the CCRA to enable the participation of SMEs in the SR&ED program include the introduction of a streamlined application form, specifically for the use of small R&D performers. In addition, a number of services such as pre-claim project review and account executives have been implemented to enable companies to file better claims and reduce processing time. These measures are in addition to the information sessions and first-time filer services that CCRA have provided for some time. The CCRA has also implemented a dispute-resolution mechanism designed to provide an easy way for SME claimants to resolve any disputes that may arise.

CCRA recently concluded focus group testing and is planning a survey of SMEs in cooperation with l'Association de la recherche industrielle du Québec. This survey is intended to identify issues and will compliment activities such as the ongoing series of tax practitioners' workshops that are being held across the country.

Recommendation 7

That the Government of Canada perform an information and demonstration service for Canadian businesses with respect to emerging and new technologies and processes with the objective of facilitating their transfer and adoption in Canada.

Response

The Government of Canada has put in place a number of initiatives that support the transfer of technologies. These include:

- The National Research Council's (NRC's) Industrial Research Assistance Program is a network of several hundred technical advisors across Canada who are available to assist Canadian firms in adopting and upgrading their production processes. This program also provides financial assistance to businesses to support R&D in manufacturing.

- NRC's Canadian Technology Network (CTN) is a national network of technology and related business service providers, providing innovative Canadian companies quick and personal access to expertise, advice and information to meet technology and related business challenges. CTN has more than a thousand members, including industry associations, research organizations, governments, universities and colleges.

- NRC's Research and Technology Development Program supports research in manufacturing.

- NRC's Technology and Industry Support Program connects companies to new technologies and advice.

- Industry Canada's Technology Partnerships Canada program aims to help Canadian firms in moving research from being precompetitive to commercializable through shared-costs approaches.

- PRECARN, a national industry-led consortium, acts as a facilitator in bringing together technology users, suppliers, developers and researchers. The Government of Canada continues to support this initiative by providing an additional $20 million to support Phase III of PRECARN's program for research and development.

The Government of Canada also provides and disseminates information to businesses via Industry Canada's Web site, *Strategis*. This includes:

- The Advanced Manufacturing Web site contains the Solutions for Advanced Manufacturing database of technology providers.

- The National Expertise index lists thousands of university and government researchers in manufacturing, materials and process technology development.

- The Canadian Patent Database is a searchable database of more than 1.4 million patent documents and includes links to Intellectual Property/Patent Offices of some 30 countries, including the U.S. Patent and Trademark Office, the U.S. Copyright Office and the European Patent Office.

Recommendation 8

That the Government of Canada provide incentives for technology adoption that are specifically designed to enhance innovation in the manufacturing sector and in small and medium-sized businesses.

Response

The definition of *scientific research and experimental development* that is used by Canada is consistent with the international definition of SR&ED, including the one adopted by OECD. On the other hand, innovation is a broad concept and includes many types of expenditures, including those on SR&ED and other activities. Any expansion of the parameters of the SR&ED program to include expenditures on innovation would increase the costs of the program beyond what the Government could reasonably afford. Annually, about $1.4 billion in tax credits are claimed by some 11 000 businesses that perform SR&ED.

The Government has chosen to direct the tax assistance to SR&ED, i.e., basic research, applied research, and experimental development. The policy rationale for limiting the tax incentive program to SR&ED expenditures is that these activities have the greatest need for public support and the justification for such support is the strongest. These activities have large spillover benefits to the economy.

Even though the SR&ED tax incentive program does not apply specifically to innovation, the Government recognizes that it is important for Canada to develop an innovative economy. That is why the Government is increasing its support for the kind of ground-breaking research that will provide new ideas, products and services and generate continued economic growth in Canada. Budget 2000 included more than $4.1 billion worth of targeted investments in 1999–2000 and the next three years.

Although the Government does not provide incentives for technology adoption per se, there are government programs to encourage innovation in the manufacturing sector and in SMEs. Technology Partnerships Canada (TPC) makes strategic investments in technological development in order to increase economic growth, creating jobs and wealth, and supporting sustainable development. TPC advances and supports government initiatives by investing strategically in research, development and innovation in order to encourage private sector

investment, and so maintain and grow the technology base and technological capabilities of Canadian industry. TPC also encourages the development of SMEs in all regions of Canada. TPC Eligible Areas include advanced manufacturing and processing technologies, and advanced materials processes and applications.

The Industrial Research Assistance Program (IRAP) of the National Research Council provides technical assistance to Canadian SMEs to help boost their productivity, profitability and international competitiveness. IRAP also provides project management and financial assistance for a variety of small-scale initiatives. The goal is to ensure that the technology enhancement project contributes new and useful information to the company and that it improves performance. Approximately 10 000 clients receive advice each year from IRAP, including some 3500 whose technical projects are co-funded by IRAP.

Regional agencies also work to seek to improve the productivity and competitiveness of SMEs by improving their access to innovation and technology. For example, both the Atlantic Canada Opportunities Agency and the Canada Economic Development for Quebec Regions have programs to assist SMEs in this regard.

CHAPTER 4 — SMALL AND MEDIUM-SIZED BUSINESSES

Recommendation 9

That the Government of Canada study the corporate tax regime, including Budget 2000 proposals, in terms of the incremental tax burden it may impose on small and medium-sized businesses. The objective of the study would be to ensure that Canadian entrepreneurs do not face a stiff tax penalty for growing their businesses and thus retain the incentive to contribute further to the Canadian economy.

Response

Growing businesses are important to Canada because they are the source of new ideas, new forms of competitive advantage and new jobs. The future economic health of Canada depends on the country's ability to achieve greater success through the growth of these small businesses.

However, small businesses have greater difficulty in obtaining adequate financing than larger firms, which impedes their ability to grow. As a result, the federal income tax system contains several special provisions that reduce the need for external financing as well as encourage investment in small businesses.

Reduced corporate tax rates allow them to retain more after-tax earnings for re-investment. In addition to reduced statutory income tax rate, various other tax measures reduce the corporate tax burden on small business income, thereby encouraging investment and helping small businesses to access the capital they need to grow. These measures include a $500 000 lifetime capital gains exemption for small business shares and an enhanced SR&ED tax credit.

In Budget 2000, the Government announced its intention to reduce, within five years, the federal corporate income tax rate from 28 percent to 21 percent on business income not currently eligible for special tax treatment, and that, as an initial step, effective January 1, 2001, the federal corporate income tax rate on such income will be reduced by one percentage point. In addition, beginning in January 2001, small businesses currently paying tax at the general 28-percent rate will benefit from the new 21-percent corporate tax rate on business income between $200 000 and $300 000. These proposals will significantly reduce the incremental income tax burden faced by growing small businesses.

CHAPTER 5 — PRODUCTIVITY, COMPETITIVENESS AND PROSPERITY

Recommendation 10

That the ministers of Industry and Finance jointly undertake a study of the floating Canadian dollar as it applies to the Canadian economy, devoting specific attention to its impact on the productivity and competitiveness of Canada's business sector.

Response

At this time, the Government has no plans to undertake such a study or to alter its policy on the exchange rate. Nonetheless, the Government, in its ongoing analysis of the economy, does look at the relationship between movements in the exchange rate and Canada's productivity and international competitiveness.

CHAPTER 6 — ECONOMIC FORCES DRIVING PRODUCTIVITY

Recommendation 11

That the Government of Canada pursue with the provinces an improved agreement on internal trade that would remove remaining barriers to interprovincial trade and include a dispute-settlement mechanism and enforcement provisions modelled on those of the North American Free Trade Agreement, but adapted to the national context.

Response

The Government of Canada is committed to improving the Agreement on Internal Trade (AIT). To this end, the Committee on Internal Trade (CIT), composed of the federal, provincial and

territorial ministers responsible for internal trade, met on April 28, 2000, in a continuing effort to improve the disciplines under AIT. Ministers discussed the future direction of the Agreement, and agreed that the first order of priority was the implementation of outstanding obligations. Ministers also approved a process of consultations with business, non-government and academic groups to identify pragmatic and useful ways for improving internal trade, notably through AIT.

The Government of Canada has taken a lead role in bringing to a successful conclusion the negotiations on the outstanding obligations under AIT. These commitments are: the extension of procurement disciplines to crown corporations, clarification and improvement of the Code of Conduct on Incentives, and the negotiation of an energy chapter.

The Government of Canada is committed to taking an active role in identifying priorities for the negotiation of an improved AIT. As mentioned above, ministers have approved a consultations process for the next year that will assist the parties to AIT in establishing priorities for future negotiations. The consultations process will consist of a series of three regional sessions, to be held in Saskatoon, Moncton and Montréal, and will culminate in a national conference to be held in Ontario. CIT has agreed to meet in the fall of 2000 to address the outstanding obligations under AIT and to hold its annual meeting in April 2001.

AIT contains dispute-resolution provisions that are broadly similar to those of the North American Free Trade Agreement (NAFTA). Both agreements provide a government-to-government dispute-resolution process, with the possibility of retaliation where a party has failed to implement panel recommendations. To date, there have been only two government-to-government complaints under the AIT that have reached the panel stage. In both cases, the panel determined that the measure in question was inconsistent with AIT and recommended that the party complained against act to remove the inconsistency. Officials prepared a report evaluating the dispute-resolution process following the first complaint under AIT and recommended changes to streamline the process and improve its fairness and transparency. Ministers, at their April meeting, endorsed the report recommendations, and the dispute-resolution process has been identified as a potential area of discussion for consultations process to be held over the next year.

Under AIT, a person may request the assistance of a government to pursue a complaint under any of the sectoral chapters. Where a government is not prepared to act on the person's behalf, he or she may pursue a complaint, provided that an independent screener rules that the complaint is not frivolous or vexatious. AIT permits the award of the costs to a person for pursuing a complaint, to an established limit, however, it does not provide for compensation. To date, two person-to-government complaints have been initiated. In both cases the screener has ruled the case to be frivolous, thereby terminating the dispute-resolution process. The role of the screener is an issue for examination to ensure that the person-to-government dispute-resolution process operates as intended.

Recommendation 12

That the Government of Canada modernize its legislative framework in the financial services sector with the objective of enhancing productivity.

Response

The legislation governing Canada's federally regulated financial institutions is subject to review every five years. However, in order to keep up with a rapidly changing environment, the Government has actually made changes to the regulatory framework four times in the last decade.

In December 1996 the Government established the Task Force on the Future of the Canadian Financial Services Sector. After extensive study and consultations, in September 1998 the Task Force presented the Government with 124 recommendations that were subsequently reviewed by two parliamentary committees. Both committees tabled their reports in December 1998, and both were generally supportive of the majority of the Task Force's recommendations. Taking all these recommendations into consideration, the Government released in June 1999 a policy statement titled *Reforming Canada's Financial Services Sector: A Framework for the Future.* Legislation to implement that new policy framework was introduced in the House of Commons on June 13, 2000 (Bill C-38). The legislation is complemented by a number of government policy statements and non-legislative initiatives, as well as merger review guidelines that were also released on June 13.

The legislative and policy proposals are articulated around four principles, which together will contribute to improve productivity. They are:

Promoting efficiency and growth with:

- a new definition of widely held ownership that provides greater scope for strategic alliances and joint ventures with significant share exchanges;
- a new holding company regime to provide greater structural flexibility; and
- an examination of capital taxation policy with the provinces.

Fostering domestic competition by:

- encouraging new entrants with liberalized ownership rules and lower minimum capital requirements;
- facilitating the ability of the credit unions to compete by allowing a restructuring of their system;

- expanding access to the payment system to provide additional competition in deposit-like services; and

- allowing foreign banks to offer services to businesses and individual consumers via branches in addition to subsidiaries.

Empowering and protecting consumers of financial services with:

- measures to improve access to financial services regardless of income or place of residence, including a low-cost account and a process to govern branch closures;

- a Financial Consumer Agency of Canada to strengthen oversight of consumer protection measures and expand consumer education activities;

- an independent Canadian Financial Services Ombudsman;

- measures to prevent coercive tied selling and improve the information consumers receive when purchasing services or making investments;

- public accountability statements for financial institutions to report on their contributions to the Canadian economy and society; and

- more and better statistics on and analysis of business financing for SMEs to provide a better understanding of their needs.

Improving the regulatory environment by:

- improving the governance of the payments system;

- reducing the reporting burden relating to Canada Deposit Insurance Corporation standards;

- providing the Superintendent of Financial Institutions with new powers to deal with the potential risks arising from increased competition; and

- streamlining the Office of the Superintendent of Financial Institutions' regulatory approval process.

The Government remains committed to providing Canada's financial institutions with an environment that stimulates economic growth and innovation, in the interest of all Canadians. Legislation to implement a new framework was tabled in June (Bill C-38 — *An Act to establish the Financial Consumer Agency of Canada and to amend certain Acts in relation to financial institutions*).

Recommendation 13

That the Government of Canada evaluate the existing restrictions on foreign ownership imposed on the business community on a sector-by-sector basis and conduct an economic analysis of their benefits and costs.

Response

The Government of Canada has significantly reduced sectoral restrictions on foreign investment over the years to the point that there are very few remaining. Industry Canada is in the initial phase of developing a study to catalogue and determine the best methods to evaluate the remaining restrictions.

Recommendation 14

That the Government of Canada review its regulatory and administrative processes for any impediments they may impose on investors in Canada and remove them when contrary to the public interest.

Response

The Government of Canada recognizes the importance of sound regulations that do not unduly impose impediments on investment in Canada. The Government also considers the balance of public interests — for example, aiming to create a regulatory environment that is not a barrier to investment while maintaining high standards of environmental and health protection. At the same time, *Bill S-19 — An Act to amend the Canada Business Corporations Act and the Canada Cooperatives Act and to amend other Acts in consequence* contains elements that will lead to less regulation for business (eliminating duplication with cost savings), provide new clarity on directors' liability and improve the climate for risk taking.

There are processes in place to promote sound regulation making. The Federal Regulatory Policy ensures that "...use of the government's regulatory powers results in the greatest net benefit to Canadian society." The policy requires the regulatory authorities to ensure, inter alia, that:

- they can demonstrate that a problem or risk exists, federal intervention is justified and regulation is the best alternative;
- Canadians are consulted and that they have an opportunity to participate in developing or modifying regulations and regulatory programs; and
- the benefits outweigh the costs to Canadians, their governments and business.

CHAPTER 7 — INNOVATION, INNOVATION SYSTEMS AND INTELLECTUAL PROPERTY

Recommendation 15

That the Government of Canada's innovation agenda commit to a five-year plan of increasing expenditures for research and development, ensuring that all of these increases are larger than the expected rate of inflation, with the objective of reinforcing the upward trend in Canada's R&D-to-GDP ratio established in the 1990s and to raise it above the G-7 country average.

Response

The Government recognizes the importance of investment in research and development to Canada's international competitiveness and ultimately to improvement in Canadians' standard of living.

While Budget 2000 announces new investments, it does not seek to reflect the entire federal commitment to innovation. The federal government, for example, currently spends about $800 million a year on R&D in industry through programs such as TPC and IRAP. Annually, about $1.4 billion in tax credits are claimed by some 11 000 businesses that perform SR&ED.

The above does not include the federal contribution to industrial innovation through university R&D programs, such as the Networks of Centres of Excellence, the Canada Foundation for Innovation and the Canada Research Chairs; support for the training of the highly skilled graduates that industry needs to be competitive; and the technology and infrastructure provided by federal labs.

Budget 2000 commits another $4.2 billion to the federal strategy for making the Canadian economy more innovative. It also contains a number of tax measures designed to make Canada's economy more internationally competitive. These will, by 2004–05, be providing $1 billion in annual tax relief to the private sector.

The new initiatives in the budget should ensure sustained real growth in the federal R&D investment. Canada's relatively low level of R&D investment (as shown by the ratio of gross expenditures on research and development and gross domestic product — the GERD/GDP ratio) is not, however, largely determined by federal R&D expenditures. After adjusting for differences in the size of defence budgets, Canadian government R&D spending as a share of GDP is on par with that of most of the other G-7 nations.

Since industry presently finances about one half and the federal government about one fifth of Canada's R&D effort, the Government cannot by itself increase the GERD to GDP ratio to the 2-percent-and-above level achieved by most other G-7 nations. Therefore, both the Government and the private sector need to work in a partnership to raise the overall level of R&D efforts in this country.

Regarding private sector R&D efforts in Canada, even with the tax benefits offered by one of the world's most generous R&D tax incentive program, on the surface, Canadian industry appears to under-invest in R&D relative to other industrialized countries. In 1997, for example, the R&D financed by Canada's business enterprise sector amounted to 0.8 percent of GDP as compared with 2.2 percent in Japan, 1.7 percent in the U.S., 1.4 percent in Germany, 1.1 percent in France, 0.9 percent in the U.K., and 0.4 percent in Italy.

In conclusion, it is not the amount of R&D alone that determines the business sector's productivity growth. Other factors such as technology adoption and innovations in management, marketing, and distribution practices play important roles as well.

Recommendation 16

That the Government of Canada strengthen our national policy on intellectual property to achieve, at a minimum, a standard consistent with our international commitments with the objective of encouraging investment and innovation.

Response

A framework for intellectual property rights provides certainty and transparency that encourages trade. It also encourages innovation and investment in research and development, both at home and in export markets. It facilitates licensing arrangements (such as the transfer of technology) to establish or expand business opportunities. Finally, such a framework for intellectual property (IP) rights allows for the balancing of national objectives, such as the protection of public health and the promotion of the public interest in certain key sectors. Canada's IP regime must be competitive with the regime of its key trading partners and be consistent with its international commitments while being responsive to domestic policy priorities.

Over the years, Canada's IP regime has been enhanced in line with Canada's evolving international commitments. For instance, the WTO-TRIPS agreement was implemented by developed countries, including Canada, effective on January 1, 1996. Canada also implemented NAFTA more than six years ago, which includes Chapter 17 on IP rights. Canada is also a member of the Patent Cooperation Treaty, whose main purpose is to facilitate international patent filings.

In line with this recommendation of the House Standing Committee, the Government of Canada's objective regarding IP policy will continue to focus on international consistency with the objective of encouraging investment and innovation. Canada will participate in continuing international negotiations covering intellectual property rights, and will develop negotiating positions that are consistent with our domestic IP policies and that advance Canadian IP interests as they evolve through ongoing consultations with Canadians.

CHAPTER 8 — HUMAN CAPITAL

Recommendation 17

That the Government of Canada establish an immigration pilot project for facilitating the entry of foreign skilled workers to address labour shortages in the manufacturing sector.

Response

Over the past few years, Citizenship and Immigration and Human Resources Development have piloted various projects to facilitate the entry of temporary foreign workers. This experience has led to the creation of a redesigned Temporary Foreign Worker program, which is reflected in provisions included in the new *Immigration and Refugee Protection Act* (Bill C-31).

The new Temporary Foreign Worker program recognizes that in times of skill shortages, Canadian employers need to have the capacity to quickly bring in highly skilled temporary foreign workers. Under the new program, individual employers and/or industry sectors and sub-sectors will be able to enter into agreements with Human Resources Development and Citizenship and Immigration Canada for the purpose of facilitating the entry of a negotiated number of needed foreign workers. In return, the employers will agree to implement measures to train or retrain members of the Canadian work force, or provide employment opportunities for Canadian work-seekers.

The new program will also allow certain highly skilled workers to apply for permanent residence from within Canada, and will incorporate existing pilot project provisions that allow spouses of highly skilled temporary foreign workers to be authorized to work in Canada without being subjected to a labour market test.

Recommendation 18

That the Government of Canada actively pursue the integration of lifelong learning as a cooperative venture of labour, industry and government to assure the continued growth of the skill, ability and knowledge of Canadians for and in the workplace.

Response

In the knowledge-based economy, investing in skills — by individuals, by employers and by governments — is one of the key elements of success.

Over the past three years, the Government of Canada has put in place a strategy to build on Canada's advantage as the country with one of the most highly educated work forces in the world. Saving for a child's education has been made easier by the establishment of the Canada Education Savings Grants. Obtaining a college or university education has been made more affordable through Canada Millennium Scholarships. Improvements have also been made to the Canada Student Loans Program to help borrowers pay their debts.

The Government will continue to build on this strategy. In the October 1999 Speech from the Throne, the Government committed to establishing a national action plan on skills and learning for the 21st century.

The Government of Canada, working in close partnership with other governments, public and private sector organizations, and individual Canadians will:

- support measures that will allow skills development to better match the evolving economy, under the leadership of the industry Sector Councils, which bring together representatives from business, labour, education and other professional groups to address human resource issues in important areas of the Canadian economy;

- make it easier for Canadians to finance lifelong learning; and

- provide Canadians with a single window for up-to-date and relevant information about labour markets, skills requirements and training opportunities.

The Government will propose an action plan to address the skills development needs of the adult work force and to promote the role of employers in responding to skill shortages, in response to the commitment made in the Speech from the Throne. This action plan will also ensure that individuals and firms can access high-quality labour market and learning information products to facilitate their decision making. This approach will be based on partnerships with provinces and territories as well as other stakeholders.

Recommendation 19

That the Government of Canada assess the merits of establishing a lifelong learning education savings plan that would permit individuals and/or their employers to contribute, on a tax-free basis, toward work skills training and education.

Response

While individuals have primary responsibility for investing in their own skills acquisition and upgrading, employers are responsible for addressing skill shortages needs and investing in their work force.

As such, in the October 1999 Speech from the Throne, the Government committed to establishing a national action plan on skills and learning for the 21st century, which is to include assistance to make it easier for Canadians to finance lifelong learning. The Government will develop proposals for initiatives designed to increase the participation of individual Canadians in the development of their skills.

CHAPTER 9 — MACRO-ECONOMIC CONDITIONS AND TAXATION

Recommendation 20

That the Government of Canada review and assess its capital cost allowance regulations for manufacturing and processing equipment for the purpose of ensuring that the implied rate of depreciation accurately reflects the useful economic lives of these assets.

Response

The Government attempts to ensure that capital cost allowance (CCA) rates reflect as closely as possible the useful life of the assets. Various factors affect the useful lives of capital assets, including technological obsolescence and market innovation.

The useful life of manufacturing equipment can vary widely. As a result, Budget 2000 proposed to extend the separate class election to manufacturing equipment. Although the separate class election does not change the specified CCA rate, it ensures that, upon the disposition of all property in the class, any remaining undepreciated balance can be fully deducted as a terminal loss. This provision will benefit most those sectors where manufacturing equipment has an unusually short useful life.

The CCA regime will continue to be reviewed on an ongoing basis to ensure that the CCA rates are appropriate and that the system is fair and does not impede the ability of Canadian firms to invest and compete.

Recommendation 21

That the Government of Canada, in the event of good fiscal fundamentals over the next few years, dramatically raise personal income tax brackets, as well as the basic personal exemption.

Response

The Government's proposed five-year tax reduction plan includes several measures that address this recommendation, including:

- retroactive (to January 1, 2000) reinstatement of full inflation indexing;
- an increase in the amount of income that Canadians can earn tax-free to at least $8000 by 2004;
- an increase in the spousal and equivalent-to-spousal amount to at least $6800 by 2004;
- an increase in the level of income at which the middle tax rate begins to apply from $29 590 to at least $35 000 by 2004; and

- an increase in the level of income at which the top tax rate begins to apply from $59 180 to at least $70 000 by 2004.

The proposed five-year tax reduction plan is expected to reduce personal income taxes by about $58 billion cumulatively. While this is a substantial cut in taxes, Budget 2000 was very clear that it represents the absolute minimum amount of tax relief that the five-year plan will provide. Budget 2000 indicated that many of the tax cuts listed above will happen within five years at the latest. The government will accelerate these measures in the 2001 budget and, furthermore, the government will look at new measures that are not part of the five-year plan.

Recommendation 22

That the Government of Canada reduce capital gains taxes by further lowering, to one-half, the inclusion rate of capital gains subject to tax.

Response

The Government recognizes that the tax system must be conducive to innovation, and must ensure that businesses have access to the capital they need in an economy that is becoming increasingly competitive and knowledge-based.

An examination of the taxation of capital gains conducted prior to Budget 2000 concluded that this objective would be better achieved with a reduction in the capital gains inclusion rate from three quarters to two thirds. Such a reduction would, at the same time, ensure that the tax rate on capital gains is approximately equal to the tax rate on dividends, to avoid wasteful tax planning. Budget 2000 therefore proposed this change, effective for dispositions of capital property after February 27, 2000.

The Committee also expressed concern about the effect of capital gains taxes on people investing in high-risk ventures, particularly knowledge-based companies. Budget 2000 proposed that individuals be able to defer the tax on capital gains from eligible small business investments, to the extent that proceeds are reinvested in another eligible small business investment. This measure, in combination with the reduction in the capital gains inclusion rate, improves access to capital for small businesses with high growth potential.

An additional concern of the Committee related to the taxation of capital gains is the tax treatment of employee stock options. Budget 2000 proposed to postpone taxation of gains on shares acquired under qualifying stock options to when shares are sold rather than when options are exercised. Consistent with the reduction in the inclusion rate for capital gains from three quarters to two thirds, it was further proposed that the deduction currently available for employee stock options be increased to one third. The stock option deduction reduces the tax rate on benefits from employee stock options to the same level as the tax rate on capital gains. These measures will provide employees with an added incentive to participate with their employers in the growth and success of their business.

CHAPTER 10 — ECO-EFFICIENCY AND THE KNOWLEDGE ECONOMY

Recommendation 23

That the Government of Canada place greater emphasis on encouraging the adoption of eco-efficient management techniques by industry through: (1) promoting environmental management systems, including ISO 14001 standards throughout the supply chain of major economic sectors; (2) improving environmental labelling and consumer information; (3) encouraging the development and diffusion of eco-efficient technologies and products through the use of programs that support research and development and commercialization; and (4) promoting education and awareness of eco-efficient measures such as benchmarking products and production processes for their eco-efficiency, as well as providing such analysis for small and medium-sized businesses.

Response

(1) *Environmental Management Systems*

In 1998 Industry Canada funded two important projects to ensure that key infrastructure was in place to support the timely implementation by Canadian industry of environmental management systems. One project, undertaken by the Canadian Environmental Auditing Association, developed a Canadian Environmental Auditor Certification Program to meet the requirements of ISO 14000. The second project, undertaken by the Standards Council of Canada, was the establishment of the Environmental Management Systems Accreditation Program for ISO 14000 registrars.

In March 2000, as requested by the Minister of Industry, the Standards Council of Canada (SCC), released the Canadian Standards Strategy. As part of this strategy, the SCC will publish the results of a survey of Canadian firms who have adopted ISO 14000 to help other Canadian firms determine the costs and benefits of adopting the ISO 14000 series of standards. Case studies may also be developed and posted on the SCC Web site and on the Industry Canada Strategis Web site. A multi-stakeholder committee involving Environment Canada, Health Canada, Industry Canada, Natural Resources Canada, the SCC and relevant non-governmental organizations will also be established in the fall of 2000. Its mandate will include increasing the credibility and the use of environmental management standards in Canada.

Industry Canada will continue to work with major industrial sectors to encourage the use of innovative voluntary approaches to sustainable development including the development of Memoranda of Understanding, and Codes of Practices that support the adoption of environmental management systems. As part of its next Sustainable Development Strategy, the Department is also considering the development of Web-based information products, workshops and other means to promote the adoption of environmental management systems, and a better understanding of their benefits within supply chain policies.

(2) ***Environmental Labelling and Consumer Information***

Consumers through their purchasing decisions can play an important role in encouraging the development of eco-efficient products and services. Good environmental labelling and information can assist them in this process. Industry Canada, through its Office of Consumer Affairs Contributions Program is assisting the Consumers Association of Canada to undertake a study, *Monitoring Consumer Information on Sustainability.* The study will determine whether environmental labelling and claims in the marketplace are verifiable, accurate and not misleading, and whether they assist consumers in making sustainable consumption choices. It is expected that the findings will be available in the spring of 2001 and may identify ways of optimizing environmental labelling conformance and consumer understanding in order to increase a consumer's ability to make sound environmental product and service choices.

Federal departments currently make available a diverse range information to assist consumers with environmental decisions and practices through their Web sites and other means. Some examples include Environment Canada (waste reduction and packaging), Health Canada (product safety), Industry Canada (recycling) and Natural Resources Canada (energy efficiency). New consumer information products will be developed as appropriate.

(3) ***Eco-efficient Technologies***

The Government currently has a number of programs that support the development, and demonstration of eco-efficient technologies and products. Some examples include:

- CANMET is the Canada Centre for Mineral and Energy Technology, a key research and technology development arm of Natural Resources Canada. Eco-efficiency, as it applies to reduced demand for materials and energy, is an important component of its research and development programs. CANMET strives to accelerate the development and demonstration of clean, energy-efficient conventional, alternative and renewable energy technologies as well as technologies that reduce the use of materials.

- Technology Partnerships Canada is a technology investment fund established to contribute to the achievement of Canada's objectives of increasing economic growth, creating jobs and wealth, and supporting sustainable development. TPC supports government initiatives through strategic investments in industrial research and precompetitive development. Many of these investments also contribute to eco-efficiency. TPC invests in eco-efficient technologies in such areas as better conservation of energy, water and non-renewable resources; pollution prevention through the development of clean process technologies; and pollution abatement technologies that reduce waste and/or harmful emissions.

- The National Research Council is a leader in scientific and technical research and in the diffusion of technology. The integration of environmental and eco-efficiency considerations into its activities is growing in importance. Examples include the following: the latest bio-technology developments are being applied to provide cleaner processes; construction techniques and materials are being refined to ensure more energy-efficient buildings and a more durable infrastructure of roads, water lines and sewers; and fuels cells are being developed as a cleaner base for distributed electrical power generation and as innovative options for transport power.

The Government announced in Budget 2000 that it is establishing a Sustainable Development Technology Fund at an initial level of $100 million. This fund will stimulate the development as well as the demonstration of new environmental technologies, including those that support eco-efficiency such as fuel cells. The federal budget also provides new funding totalling $210 million over three years for the Climate Change Action Fund (CCAF) and other federal energy efficiency and renewable energy programs. The CCAF has been helpful in facilitating the development of new technologies and in supporting such initiatives as the eco-efficiency audit program outlined below.

New initiatives being undertaken by the National Research Council in respect to Design for Environment, and eco-efficiency audits should also help to encourage the development and demonstration of eco-efficient technologies and products. These are outlined in Section 4 following.

(4) ***Eco-efficient Awareness***

The Government has undertaken and continues to pursue initiatives that support this recommendation. This includes indicator development and benchmarking initiatives, pilot projects to identify the best ways to assist SMEs, including the development of tools and policy research.

Indicator Development and Benchmarking

The National Research Council is developing analytic tools in simulation and modelling, combined with a benchmarking process that demonstrate the linkages of the technological, economic and environmental benefits to be gained from eco-efficient innovation. For example, NRC is supporting research and the development of tools in concurrent design and manufacturing that integrates into the design phase a thorough analysis of product performance and optimization of manufacturing techniques.

Industry Canada recently completed a study, *The Status of Eco-efficiency and Indicator Development in Canadian Industry*. The report will help to promote a better understanding of the use of eco-efficiency indicators by Canadian industry and their impact on environmental performance, competitiveness, productivity, profitability and/or shareholder value.

Environment Canada has funded the National Round Table on the Environment and the Economy (NRTEE) to undertake an extended eco-efficiency indicator program to test energy- and materials-intensity indicators and refine the definitions, decision rules and complementary indicators. The work builds on a NRTEE Feasibility Study carried out by a number of volunteer companies, especially in manufacturing, to actively participate in this new extended indicator program. The project will be completed by spring 2001.

Environment Canada is also concluding work on the Canadian Raw Materials Database (CRMD). CRMD is designed to provide life-cycle inventory data for commodities produced by the steel, plastics, aluminum, glass and wood (dimensional lumber) industries. The database will provide input data (raw materials and water) and output data (air emissions and solid waste) for the raw materials acquisition, the intermediary processing and the production of the commodities. The voluntary industry led initiative is undergoing an independent peer review process. Decisions will be taken during 2000 on how to manage, update and make available the data.

SME Pilot Projects and Tools

A promising new initiative to assist SMEs is being undertaken by the Industrial Research Assistance Program of the National Research Council. IRAP is currently developing a Web-based tool in Design for Environment (DfE), which helps to integrate environmental concerns into the design phase of product development. It will assist their cross-country network of industrial technology advisors in identifying opportunities to improve the eco-efficiency of their clients' products and processes. IRAP also proposes to develop a regional network of consulting expertise in DfE and help clients access these services.

A pilot eco-efficiency audit program to assist SMEs to improve their energy and materials efficiency and to reduce associated greenhouse gas emissions is also being undertaken. This initiative is being undertaken by IRAP in partnership with the Ontario Centre for Environmental Technology Advancement with the support of the Business Development Bank of Canada, the Climate Change Action Fund and Natural Resources Canada. This and a similar initiative in Quebec will be evaluated during 2000 and consideration given to their expansion.

Natural Resources Canada and IRAP, in conjunction with Alcan Aluminum and Abitibi-Consolidated, recently sponsored a pilot project in the Saguenay-Lac St-Jean region of Quebec. It demonstrated that eco-efficiency concepts and tools can be used to improve the environmental and economic performance of SMEs. Teams of university graduates, trained as eco-innovation advisors, were deployed in a select group of firms to identify opportunities for cost savings and environmental improvements. The pilot project developed a process for improving eco-efficiency in SMEs that included a seven-step procedure, specialized worksheets and tools, and a training manual with modules on a variety of eco-efficiency tools. A second project is now underway that will build on the experience gained in the Saguenay pilot project, and is targeted at the

automotive parts manufacturing sector. A key objective of the project will be to support ongoing capacity-building initiatives within the sector for environmental management.

Policy Research

Another important initiative is a policy research study on the use of eco-efficiency, which is being led by Natural Resources Canada, in partnership with other departments, through the Sustainability Project of the Policy Research Initiative. The study will make an important contribution to improving the understanding of eco-efficiency as it relates to sustainable development, competitiveness, shareholder value, environmental management systems, life-cycle management and other advanced environmental management tools. Moreover, it will focus on relevant examples from target sectors (natural resources, transportation, manufacturing), provide in-depth knowledge on best practices from leading companies from Canada and around the world, identify drivers and obstacles to the adoption of eco-efficiency practices in Canada and, more generally, improve knowledge about private sector approaches to overcoming the sustainable development implementation gap. A second phase of the project will be pursued with a view to transferring the results of the study to industry.

CHAPTER 11 — THE AGRICULTURE AND THE AGRI-FOOD AND BEVERAGE PROCESSING SECTORS

Recommendation 24

That the Government of Canada consult with agricultural stakeholders on building an enhanced agriculture and agri-food policy that would provide price and income support for the farming community to allow for continuous productivity improvements.

Response

The Government of Canada supports improved productivity in the agriculture sector. An important component of the support is the system of safety nets that help producers to manage risks. These programs assist producers in stabilizing their income and hence contribute to a more stable environment for investment, which in turn contributes to the productivity of the sector. An important design principle is that these programs be neutral with respect to the production and marketing decisions of producers. This ensures that government does not distort market signals, allowing producers to respond to market signals.

These programs are managed jointly by federal and provincial governments in consultation with a national safety net advisory committee, which has representation from federal and provincial governments as well as producers. Federal funding has recently been increased from $600 million to $1.1 billion per year for three years. This funding also includes an income disaster assistance program. Federal/provincial accords are required for joint management of the safety net system.

CHAPTER 12 — THE FOREST PRODUCTS SECTOR

Recommendation 25

That the Government of Canada take the position that there be no renegotiation of the Softwood Lumber Agreement with the United States at the expiry of the existing agreement.

Response

The Canada-U.S. Softwood Lumber Agreement falls under the responsibility of the Department of Foreign Affairs and International Trade (DFAIT), which has the lead role in administering the Agreement. The five-year Agreement is scheduled to terminate on March 31, 2001. While Industry Canada will continue to monitor the impact of the Agreement and provide advice to DFAIT on possible future options, DFAIT is responsible for consulting with the Canadian industry and provincial governments on the future of the Agreement. In this regard, the Minister for International Trade has appointed a senior official to conduct the consultations with Canadian stakeholders.

CHAPTER 13 — THE MINERAL AND METAL PRODUCTS SECTOR

Recommendation 26

That the Government of Canada consult with the Mining Association of Canada, the Prospectors and Development Association of Canada and the Canadian mining industry to clarify the definition of the Canadian Exploration Expenses and make flow-through share investments more attractive for potential investors.

Response

The Department of Finance has initiated consultations with the Prospectors and Developers Association of Canada (PDAC) and the Mining Association of Canada (MAC) with a view to soliciting their input and discussion. A working group composed of officials from the Department of Finance, the Canada Customs and Revenue Agency and Natural Resources Canada was established to carry out consultations with PDAC and MAC and interested provinces. The issues being reviewed include changes to the current definition of Canadian Exploration Expenses (CEE) with respect to bulk samples. Other suggestions relate to the current legislative proposals that deal with depreciable property and CEE. Additional suggestions were put forward for discussion that may assist in adding clarity and improving compliance. The Government has reviewed a number of proposals relating to flow-through share investments with both MAC and PDAC over the past two years.

CHAPTER 14 — THE OIL AND GAS SECTOR

Recommendation 27

That the Government of Canada expedite consultation with First Nations regarding resource sharing and management, including land access issues, as well as provide stewardship in resolving outstanding Aboriginal treaty claims in key oil and gas resource areas of the country.

Response

In *Gathering Strength*, the Government of Canada committed itself to reconciling grievances of the past and building new relationships with Aboriginal peoples based on mutual respect, recognition, responsibility and sharing. The Government has engaged in claims and self-government negotiations to meet these challenges. They are both difficult and time-consuming, but the investment will result in stronger, more self-reliant Aboriginal communities and a more secure economic climate for both Aboriginals and non-Aboriginals. Settlements are intended to ensure that the interests of Aboriginal groups in resource management and environmental protection are recognized and that claimants share in the benefits of development.

There are currently two major oil and gas resource areas of the country where there are outstanding claims. The first, in the Liard area (Yukon/Northwest Territories border), is subject to claims by the Liard First Nation and the Deh Cho First Nations. For the Liard First Nation claim in the Yukon, negotiations are proceeding toward land selection and interim protection. The parties to the negotiations in the Deh Cho region of the Northwest Territories are working toward a Framework Agreement and Interim Measures Agreement. The Interim Measures Agreement contemplates a land-use planning process to designate protected lands and lands that are available for exploration. In other areas of the country, such as in the Atlantic provinces, natural resources are under provincial responsibility. In these circumstances, the Government of Canada encourages the provinces and developers to consult with affected Aboriginal groups and develop cooperative arrangements that ensure that the interests of First Nations are considered and that First Nations benefit from the development.

CHAPTER 15 — THE PETROLEUM PRODUCTS SECTOR

Recommendation 28

That the Government of Canada ensure that any future environmental regulations imposed on the formulation of petroleum products, particularly gasoline, be at least as rigorous as those of the State of California in terms of both the standards set and the industry's timetable for compliance.

Response

The Government is committed to its clean-air agenda. Part of that agenda is directed toward actions to reduce the environmental and health impacts from the use of petroleum products,

including gasoline. The recent confirmation of our regulation on sulphur in gasoline is a case in point. This regulation will substantially reduce the number of premature mortalities, hospitalizations and acute respiratory symptoms resulting from poor air quality. The Government will continue to monitor the health and environmental impacts associated with the use of petroleum products and, should the science indicate that further reductions are required, the Government will take further action.

CHAPTER 16 — THE SHIPBUILDING SECTOR

Recommendation 29

That the Government of Canada seek the repeal of the so-called "Jones Act" of the United States or seek an amendment to it that would provide an exception for Canadian-built, -manned or -repaired vessels.

Response

Canada has raised the "Jones Act" in both bilateral and multilateral forums. Negotiations under NAFTA determined that there is no willingness in the U.S. Congress to make any modifications that would result in benefits to Canada. Similarly, negotiations under the auspices of the OECD are also stalemated. Within the context of the World Trade Organization (WTO), indications are that the U.S. is not prepared to entertain any significant modification in this legislation. Also, were the negotiations to be re-opened, the U.S. would want concessions in return in some other area. Notwithstanding these difficult circumstances, Canada will continue to push for changes to the "Jones Act" in order to assist the Canadian shipbuilding industry.

Recommendation 30

That the Government of Canada consult with all stakeholders of the shipbuilding industry to adopt and modify industrial policies that would assist shipbuilders in capturing niche markets.

Response

There has been much discussion recently in a number of forums concerning Canada's shipbuilding industry. The Standing Committees on Industry, on Finance, and on National Defence and Veterans Affairs have all held hearings related to shipbuilding. Also, Mr. Antoine Dubé's private member's bill, Bill C-213, has been referred to the Committee on Finance for further study. In addition, meetings with various stakeholders continue to be held by the Minister of Industry and by Industry Canada officials.

These discussions confirm that shipbuilding is a complex and ever-evolving industry, both in Canada and globally. Asian shipbuilding (more targeted to niche marketing) is even in decline, reflecting the state of maritime commerce. They also show that all stakeholders' perceptions of trends and facts related to this industry in Canada and abroad vary considerably. Views on the

current situation of the shipbuilding industry are varied amongst political parties, between shipbuilders and shipowners, and, in some cases, between shipbuilders and unions. There is one area of common agreement, however, and that is that jobs are important to workers and to their communities.

It is important to note that the federal government currently provides substantial support to the shipbuilding industry. This support includes domestic procurement by the Government, a 25 percent duty on most non-North American Free Trade Agreement ship imports, and a capital cost allowance that permits purchasers of Canadian-built and -registered ships to deduct the cost of a ship in only four years. This allowance far exceeds the 15 percent declining rate afforded to foreign-built ships.

In addition, between 1986 and 1994 the federal government contributed $198 million to a rationalization exercise led by the shipbuilding industry. This activity resulted in an industry that is better suited to current market prospects, as noted by the Shipbuilding Association of Canada.

Other government programs and policies for trade and innovation are available to the shipbuilding industry. Support for innovation includes access to the services of the Institute for Marine Dynamics as well as to the Technology Partnerships Canada program. A number of programs provide support on the international trade front. Even though not directly tied to domestic competitiveness, they do contribute to a healthier and more dynamic industry. These programs include export financing provided by the Export Development Corporation, advocacy for competitive access to international markets provided by the Department of Foreign Affairs and International Trade, and access to the services of the Canadian Commercial Corporation.

However, the federal government always remains receptive to evidence of changing circumstances within the shipbuilding sector and is committed to continuing dialogue with stakeholders.

In this regard, the Department of Industry is currently in the process of carrying out comprehensive consultations with a broad representation of shipbuilding industry stakeholders. The purpose of these consultations is to:

- assist the Department to respond to the recommendations of the Standing Committee on Industry;

- through dialogue and sharing of information, develop a common understanding of the facts and trends facing the industry; and

- discuss various opportunities that may help the shipbuilding industry come to terms with the realities of domestic and global market conditions.

As this information evolves, all stakeholders, including government, industry proponents and labour will be better equipped and able to deal with the future directions of the industry.

CHAPTER 17 — THE AUTOMOBILE SECTOR

Recommendation 31

That the Government of Canada provide incentives to gain a greater percentage of the automobile research and development activity for Canada.

Response

The Automotive Competitiveness Review (ACR) of 1998, conducted by Industry Canada in association with other federal departments, identified innovation as an area that is essential for the competitiveness of the Canadian automotive industry. Federal government support already includes a number of initiatives such as the Canadian Foundation for Innovation, Technology Partnerships Canada, technology networks, and one of the most generous R&D tax credit systems in the world. The ACR also recognized that Canada's automotive industry R&D expenditure was four times less than the manufacturing sector average and 25 times less than the U.S. auto sector.

This R&D gap would appear to be at odds with the fact that Canada offers a supportive R&D infrastructure, including excellent university research centres. This is due in part to the highly globalized and rationalized nature of the automotive industry in North America with Canadian automotive assemblers benefiting greatly from R&D undertaken in their international corporate headquarters.

Last year, the federal government designated funds to establish Networks of Centres of Excellence (NCEs) in four priority areas that are strategically important to Canada. One of these areas was the automobile of the 21st century. A Letter of Intent, prepared on behalf of some 30 universities and 70 other public and private institutions was submitted and is pending approval. An Automotive NCE will promote collaborative research, enhance Canada's reputation as a place to conduct automotive R&D, and help to gain a greater percentage of the automobile research and development for Canada.

The federal government also supports targeted transportation energy-research initiatives such as the following: lightweight materials (Canadian Lightweight Materials Research Initiative); 20 advanced fuels cells projects; and improvement of fuel quality and emissions through the interdepartmental Program of Energy Research and Development.

Additionally, the Canadian Customs and Revenue Agency is working with the automotive sector to better understand how it conducts SR&ED in Canada with a view to improving its participation in the SR&ED program.

CHAPTER 18 — THE AEROSPACE SECTOR

Recommendation 32

That the Government of Canada seek bilateral negotiation and resolution of the aerospace dispute with Brazil in advance of any appellate ruling by the World Trade Organization.

Response

The Government has been promoting, and will continue to promote, negotiations with Brazil as the best means to resolve the difference with Brazil over illegal export subsidies to the Brazilian aircraft manufacturer Embraer. At the same time, however, the Government will continue to take the steps necessary to protect its interests before the WTO, including retaliation.

CHAPTER 19 — THE INFORMATION AND COMMUNICATIONS TECHNOLOGIES SECTOR

Recommendation 33

That the Government of Canada provide leadership in its regulatory policies, ensuring the protection of privacy and security for Canadians while introducing competition in and between information and communications products and technologies.

Response

The *Telecommunications Act*, which came into force on October 25, 1993, established a new legislative framework for the Canadian telecommunications industry. In so doing, it provided for an integrated Canadian market for telecommunications services, a large component of the information and communications technologies sector. Among the objectives of the Act are to foster increased reliance on market forces for the provision of telecommunications services and to encourage innovation. All segments of the Canadian telecommunications service industry have been opened to competition.

However, regulatory conditions for competition and affordable access also require a balance to be struck in the transition from regulated monopolies to competition; regulation must foster competition, and steps must be taken to ensure that all Canadians have access to high quality affordable service, especially in areas where market forces alone will not achieve this objective.

As markets become increasingly competitive, though, and the pace of technological change quickens, it may be no longer possible to rely on regulatory methods developed in a monopoly era to achieve our social policy objectives. So we are innovating: looking at new ways to foster access to affordable, high quality telecommunications services through "Connectedness" initiatives complemented by Canadian Radio-television and Telecommunications Commission

(CRTC) regulatory measures to establish a framework that will not only foster competition, but also maintain appropriate measures ensuring access to affordable telecommunications services.

Commitments in Budget 2000 will further this commitment for access to the information economy for all Canadians. The National Infrastructure Program includes telecommunications infrastructure among projects eligible for funding, and the CRTC will be directed to report annually on the status of competition and diffusion of advanced telecommunications services at affordable rates across Canada. This will provide information needed for the CRTC to better consider the effect of regulatory initiatives, and for governments at all levels to consider whether further policy or program initiatives are required to achieve our objectives.

The Government is also continuing to seek ways to create an environment in which Canadians can be productive and competitive in the global knowledge-based economy. In part, this means creating an environment that fosters the growth of electronic commerce by balancing economic, privacy, human rights and social concerns with the requirements for law enforcement and national security to maintain public safety.

The protection of personal information is one of the cornerstones of electronic commerce. With the passage into law of Bill C-6, the *Personal Information Protection and Electronic Documents Act* provides the privacy protection to ensure the trust, reliability and confidence that is the foundation of electronic commerce. Consumers and businesses will be able to conduct their on-line transactions with the confidence that privacy protection measures are in place. Canadians have repeatedly asked for privacy protection and businesses increasingly realize that it is a competitive advantage in the new information economy.

The security of communications complements privacy protection measures and promotes trust in electronic commerce. Advanced technologies, such as cryptography, can provide a high level of security that will establish confidence among businesses and consumers. In October 1998, Minister Manley announced Canada's policy on cryptography. The policy allows Canadians to develop, import and use whatever cryptography products they wish and does not impose mandatory key recovery or a licensing regime. Cryptography allows users to authenticate credit card numbers, electronically signed documents, e-mail or other information stored in computers or transmitted over networks, such as the Internet. It protects sensitive information such as communications, bank accounts, medical records and intellectual property. Cryptography is also an important tool in crime prevention, protecting against economic espionage and safeguarding the computer systems that support Canada's vital communications, transportation and other critical infrastructures.

A variety of measures are necessary to protect our critical infrastructures, particularly the advanced communications networks that provide the underpinning for the knowledge-based economy. Information and communications technologies, such as firewalls, intrusion-detection systems and authentication services are being developed and implemented to protect corporate assets and ensure the privacy of consumers.

Recommendation 34

That the Government of Canada: (1) establish Canada's brand in e-business domestically and globally; (2) accelerate the transformation of existing business in Canada; (3) foster e-business creation and growth; (4) expand the e-business talent pool in Canada; (5) make Government On-Line a major priority; and (6) build Canada's leadership in international Internet policy development.

Response

The Government of Canada is developing the world's best electronic commerce framework. Working with partners, both domestically and internationally, we are creating the most favourable conditions possible for the rapid development of electronic commerce. With the passage into law of Bill C-6, the *Personal Information Protection and Electronic Documents Act*, a critical element of Canada's Electronic Commerce Strategy has been put in place. The new law, and the other elements of our electronic commerce policy environment, provide a foundation for electronic commerce that will help move Canada to the forefront of the global digital economy.

It is now the private sector's turn to take advantage of this environment by developing and using ground-breaking products that offer new, innovative on-line services. To ensure rapid adoption of electronic commerce, the Government must continue to partner with and support various private sector initiatives aimed at accelerating Canadian electronic commerce awareness, adoption and innovation. The visionary work of the Canadian E-Business Opportunities Roundtable, which is supported by Industry Canada's Electronic Commerce Task Force, exemplifies this type of initiative.

The Government notes that six elements of recommendation 34 stem directly from *Fast Forward: Accelerating Canada's Leadership in the Internet Economy*, the January 2000 report of the Roundtable. The Canadian E-Business Opportunities Roundtable is a private-sector led initiative formed in 1999 to develop a strategy for accelerating Canada's participation in the Internet economy.

e-Team Canada is the Roundtable's action plan for implementing this strategy. After the release of *Fast Forward*, Roundtable members expressed interest in maintaining their momentum to ensure Canadians understood the opportunity before them. A total of six sub-teams, led by leading Canadian CEOs and supported by key Industry Canada senior officials, have been formed to focus on implementing the Roundtable's main recommendations:

- e-Business Acceleration (John Wetmore, IBM Canada);
- Capital Markets (John Eckert, McLean-Watson Capital);
- International Investment (Robert Greenhill, Bombardier);

- Talent Pool (Kelvin Ogilvie, Acadia University);
- Canadian Trustmark (Peter Nicholson, BCE Inc.); and
- Government On-Line (J.P. Soublière, Anderson-Soublière).

e-Team Canada is a voluntary, private-sector led initiative in which the public sector has been a full and equal partner. Industry Canada, through the Electronic Commerce Task Force is providing the secretariat support for the Roundtable's further efforts in this area. Industry Canada is also working closely with the Roundtable on a series of regional events aimed at helping Canadian SMEs understand and act on the electronic business imperative. For more information on e-Team Canada, please see **http://e-com.ic.gc.ca**

Regarding Recommendation 34, part 5 — "make Government On-Line a major priority," the Government On-Line (GOL) initiative is a key federal priority and is one of the six pillars in the Connecting Canadians agenda, which positions Canada as a global leader in the knowledge-based economy. In the October 1999 Speech from the Throne, the federal government made a commitment to provide all information and services electronically by 2004. In Budget 2000, $160 million was set aside ($80 million in 2000–01, $80 million in 2001–02) to fund government-wide initiatives to commence the GOL strategy.

GOL is about using information technology to provide the best possible service to Canadian citizens and businesses. Federal organizations are working together to bring together information and services into one-stop integrated Web sites around the needs of clients, mindful of both content and cultural implications. Putting government services on-line will leverage the growth of electronic commerce and improve Canada's competitive position in the growing e-commerce marketplace.

An example of an innovative GOL clustering project is Natural Resources Canada's work to combine information on departmental activities with geo-spatial data through GeoConnections, a national partnership of federal, provincial/territorial, private and academic sectors making Canada's geo-spatial information accessible on the Internet. This is a first step toward a Canadian Natural Resources Knowledge Network, the only one of its kind in Canada, providing stakeholders with a primary portal to access and integrate data, information and knowledge from Canadian natural resources sectors at federal, provincial and private sector levels. It will also enable Canadians to make better decisions on the stewardship, sustainable development and economic diversification of their natural resources by providing integrated scientific and policy information through client-focussed, on-line access.

Recommendation 35

That the Government of Canada encourage greater investment in both public and private telecommunications infrastructure, particularly for the more remote communities and regions of the country.

Response

Telecommunications is a highly capital intensive industry. In 1999 alone the telecommunications industry invested $6.3 billion or 5.1 percent of the total capital expenditures invested by all industry sectors in the Canadian economy. Since 1987, $65 billion has been invested in telecommunications, which represents a compounded average growth rate of 4.6 percent.

With respect to the Community Access Program (CAP), it is a key component of the Connecting Canadians strategy. CAP aims at making the Internet more accessible to everyone. Through CAP, close to 4500 public access sites have been created so far in rural and remote communities with populations between 400 and 50 000.

The program has been extended to urban communities with populations of more than 50 000 to help ensure widespread Internet access, especially to low-income, disadvantaged and young Canadians. The goal is to create 10 000 public access sites by March 31, 2001. The Community Access Program, both rural and urban, is not funded past March 2001.

Other programs that improve connectivity include SchoolNet, the Computers for Schools Program and VolNet. Through SchoolNet and its partners all public schools and libraries were connected to the Internet in 1999. SchoolNet is now extending connectivity from schools to the classroom. Computers for Schools has delivered more than 200 000 computers to schools and libraries across Canada. The Program's overall goal is 250 000 computers by March 31, 2001. Funding for both SchoolNet and Computers for Schools comes to an end in March 2001. Through the VolNet program, the Government plans to connect 10 000 voluntary organizations to the Internet by March 31, 2001.

Another area where there has been progress relates to the high cost of serving areas related to telecommunications. Services to high-cost serving areas have been extensively examined by the CRTC through a lengthy public proceeding initiated in 1997. Among other things, the Commission set three goals to be achieved over time: (1) extend service to unserved areas; (2) upgrade service levels in undeserved areas; (3) maintain service levels and ensure that existing levels do not erode under competition.

Recognizing that the level of telephone service throughout Canada is very high, the Commission has identified a basic level of service that all Canadians should have access to. The Commission's basic service objective includes: (1) single line touch-tone access; (2) toll-free access to an Internet Service Provider; (3) access to 911, voice relay services, operator services and long distance services; and (4) a copy of the local telephone directory.

Telephone service improvement plans, already put in place by the telephone companies, will improve service aims to upgrade service for roughly 13 000 Canadians without telephone service and close to 7700 without single-line service. To address the remaining unserved and undeserved population in the high-cost serving areas, the telephone companies were directed to file service improvement plans. The smaller telephone companies were required to file their multi-year proposal by March 1, 2000, and the Stentor companies will be required to do so at the time of the review of the price cap regime in 2001.

CHAPTER 20 — THE BIO-TECHNOLOGY SECTOR

Recommendation 36

That the Government of Canada provide more funding for health and environmental research on genetically engineered and modified foods and new pharmaceutical products.

Response

The Government of Canada has made significant funding commitments for research in recent budgets. Specific funding has also been provided for biotechnology research. In the 1999 Budget, the federal science-based departments and agencies have received $55 million over three years for bio-technology research and development. Budget 2000 has $90 million over three years to strengthen the federal science-based capacity of bio-technology regulations, including funding to increase the knowledge base related to environmental questions associated with products of bio-technology.

A one-time grant of $160 million has been provided to Genome Canada to help establish technology platforms for major genomics R&D projects that will contribute to research on new bio-pharmaceutical products. This work will be complemented by the additional $900 million for research infrastructure under the Canada Foundation for Innovation and the $900 million to establish 2,000 Canada Research Chairs to build a critical mass of world-class researchers.

The Government of Canada recognizes the importance of the connection between the environment and the health of the Canadian public. Health Canada has recently launched initiatives such as the development of Environmental Assessment Regulations for chemicals, polymers and products of bio-technology. The Department is making a concerted effort to assess the impact of products of bio-technology from the perspective of sustainable development. The scope and technical nature of these initiatives pose significant challenges for risk assessment, public communications and the attainment and retention of skilled researchers.