Comments on House of Commons Standing Committee on Finance report entitled "The Future We Want: Recommendations for the 2014 Budget"

As part of the cycle of preparation for the 2014 federal budget, the government accepted briefs (via an on-line form) by over 300 individuals or organizations, including the CAP, over the summer of 2013. Roughly 74 of the submitting organizations, again including the CAP, were identified as being concerned with "Innovation and Commercialization". A number of witnesses were then invited to appear before the House of Commons Standing Committee on Finance (The Standing Committee), in November 2013, to provide specific comments and proposals regarding:

- focusing on fiscal sustainability and economic growth;
- helping vulnerable Canadians;
- supporting research and innovation;
- ensuring prosperous and secure rural and urban communities;
- improving government efficiency; and
- maximizing employment opportunities for Canadians.

A report based on this pre-budget consultation process was released by the Standing Committee in December 2013. It can be viewed at
http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=6380037&Language=E&Mode=1&Parl=41&Ses=2

Some comments on the report, prepared by members of the CAP Science Policy Committee, follow.

For each topic, the document provided some background, described testimony provided by witnesses, and then listed the committee recommendations. Transcripts of those parts of each session dealing with testimony from specific witnesses can be viewed via links embedded in the report. At the end of the document, there were also supplementary comments or opinions provided by the NDP and Liberal members of the committee.

Briefs submitted to the Standing Committee can be viewed using links embedded in Appendix A of the Standing Committee Report. Briefs identified as being related to Innovation and Commercialization were submitted by ~74 organizations including:

- **Association of Universities and Colleges of Canada**. Recommended that the budget should commit to the principle of sustainable, predictable research funding for the granting agencies.
- **CFI, NSERC, CIHR, SSHRC** (joint submission): Recommended new investments across the full spectrum of research and across all disciplines to sustain and enhance Canadian research excellence and competitiveness.
- **CAP**: Recommended that the government sustain investment in basic research at universities, which creates knowledge and trains highly qualified people, both of which are foundational for long-term economic and social prosperity. It was pointed out that to meet the budget 2012 goal of preserving "programming in support of basic research," new funds are needed to begin to compensate for reductions in basic research at the NRC over the past two years and for inflationary erosion over a decade in the NSERC Discovery Grants (DG) program. Accordingly,

CAP recommended that baseline funding for basic research at universities through the DG be increased by at least $15M (~5%).

- **Canadian Consortium on Research.** Recommended an additional $150 M in funding for NSERC, CIHR, SSHRC for each of next three years. Spoke of how the public interest is served by investment in independent peer-reviewed research.
- **Chemical Institute of Canada:** Recommended targeted fellowship funding at the PhD level (1000 four-year full-funded fellowships) and the postdoctoral level (300 two-year fellowships split evenly between academic and industrial venues).
- **Coalition for Canadian Astronomy:** Recommended that the Government invest US$287 million over the 2014-22 period to secure Canada's ongoing 20% share in the Thirty Meter Telescope (TMT), a unique Asia-Pacific partnership of Canada, the US, India, China and Japan.
- **Institute for Quantum Computing.** Requested $55.5 M over 7 years.
- **McGill University :** Proposed that the Government build on existing successful investments in excellence (Vanier scholarships, Banting fellowships, Canada Research Chairs, Canada Excellence Chairs, Networks of Excellence).
- **Partnership Group in Science and Engineering:** Recommended an increase of targeted funding for both postgraduate and postdoctoral fellowships in the areas of health, natural sciences and engineering, ensuring that more Canadians are equipped to meet future labour market needs and gain experience in industrially relevant research, development and commercialization towards their transition into the workforce.
- **The U15 Group of Canadian Research Universities**: Recommended investing in Canada's economic competiveness by funding high end research excellence thereby addressing a gap in the current funding system by allowing top research institutions to attract and retain global talent.
- **The Universities of Alberta, British Columbia, Calgary, Saskatchewan, and Toronto:** In separate briefs, each of these institutions recommended the creation of a national Excellence Fund to, in the words of the UBC brief, "increase the presence, competitiveness and contribution of Canadian universities in the top international league of universities".
- **The University of Manitoba:** Recommended the federal government make a sustained, long-term commitment to research funding, to flow through the granting agencies.

Chapter 4 of the report, entitled "Supporting Research and Innovation" starts with some background. In the "Overview" it is stated that "While there is a direct link between applied research and innovation, the link between basic research and innovation is more tenuous". This statement is included in a paragraph describing OECD data but whether or not that statement is attributable to the OECD is not made clear. In a figure comparing gross expenditures on research and development (GERD) as a percentage of GDP, Japan and the UK have lower percentages of government financed GERD than Canada. Norway has a smaller percentage of Industrially-financed GERD than Canada and the percentage of industrially-financed GERD in the UK appears to be comparable to that of Canada. All of the other countries shown have higher percentages of both government-financed and industrially-financed GERD than Canada.

Another figure shows that federal expenditures on science and technology in Canada peaked at above $7,600 M in 2010-2011 and have since decreased to under $5,900 M in 2013-2014. This decline is attributed to the end of the stimulus program that was announced in the 2009 budget following the economic crisis. It is stated that the largest single source of federal support for industrial R&D is the Scientific Research and Experimental Development investment tax credit (ITC). There is some discussion of a reduction in the ITC rate that was announced in the 2012 budget.

Another figure (Fig 13) shows year by year expenditures by CFI, CIHR, NRC, NSERC, and SSHRC. NRC spending declines sharply after 2010-2011. CIHR spending declines by 5-6% between 2010-2011 and 2013-2014. NSERC spending peaks around 2011-2012 and 2012-2013 and then declines by a few percent in 2013-2014.

The invited witnesses cited in the "Tax Incentives" section of Chapter 4 were the **Aerospace Industries Association of Canada** (allow exchange of earned tax credits for federal cash contributions), **Deloitte LLP** (make the ITC fully refundable, implement a "patent box" tax incentive and an angel tax credit), and the **Information Technology Association of Canada** (increase the qualified pool balances used to calculate total qualified Scientific Research and Experimental Development expenditures).

The invited witnesses cited in the "Federal Funding" section of Chapter 4 were **CFI** (enhance funding for granting councils, stable and predictable annual funding for CFI), **Sunnybrook Health Sciences Centre** (collectively increase granting council budgets by $300 M over next three years, use a single rate for the Indirect Costs Program, invest a portion of the Federal Economic Development Agency funding in medical research), **Polytechnics Canada** (make the College and Community Innovation Program eligible for the Indirect Costs Program, allocate a larger proportion of R&D funding to social sector innovation which the report identifies as funding to improve services to individuals), the **U15-Group of Canadian Research Universities** (a research excellence fund called "Advancing Canada Research Excellence" starting at $100 M and reaching $400M annually in four years), **the Association of Universities and Colleges of Canada** (also supporting a research excellence fund and also an increase in the proportion of indirect costs covered by the Indirect Costs Program), and the **Information Technology Association of Canada** (establishment of a successor program to the Digital Technology Adoption Pilot Program when it ends in 2014).

The report also cites a number of organizations (**Financial Executives International Canada**, the **Investment Industry Association of Canada**, the **Chartered Professional Accountants of Canada**, The **Fédération Étudiante Universitaire du Québec**, **Mouvement Desjardin, Canadian Manufacturers & Exporters**) and **Kevin Page**, as an individual, who were invited to comment in areas other than "Supporting Research and Innovation" but whose comments were relevant to that topic. In particular, Kevin Page advocated a study on the causes of weak productivity growth in Canada.

The outcome, with regard to "Supporting Research and Innovation" was two rather general recommendations: (1) that the federal government continue to support basic research and development, including through the federal granting councils and the Indirect Costs Program and (2) that the federal government continue to support applied research. The second recommendation

identified some existing programs (**NextGen Biofuels Fund** and **Forestry Industry Transformation Program**) and suggested looking at new initiatives related to digitally enabled research and partnerships.

In the chapter entitled "Improving Government Efficiency", the committee recommended "that the federal government vigorously and continually review spending of taxpayers' money to eliminate all waste and inefficiencies, including through the elimination of government programs that no longer serve their purpose or achieve their intended result". While the intent of such a recommendation is completely appropriate, the recommendation does not address the question of how government might assess the extent to which programs serve their purpose or achieve their intended results.

In the chapter entitled "Maximizing Employment Opportunities for Canadians", two of the witness comments touched on issues that might be relevant to the training aspect of research funding. The **Canadian Association of Petroleum Producers** suggested "tightening the link between post-secondary education and needed workforce skills". Among its suggestions, **Polytechnics Canada** supported linking federal support for R&D with federal support for apprentices.

Supplemental reports by NDP and Liberal members of the committee took issue with some aspects of the standing committee report but did not specifically address research and development issues.

In summary, the section of the report dealing with "Supporting Research and Innovation" does not seem to reflect comments provided in briefs by any organizations or individuals other than those invited to appear before the committee. The recommendations that were formulated in this area are very general and refer only to continued support for basic and applied research without suggesting either enhancement or reduction of such support.