Mr Mike Woods
Commissioner
Productivity Commission
PO Box 80
Belconnen ACT 2616

Dear Mr Woods

DRAFT REPORT ON PUBLIC SUPPORT FOR SCIENCE AND INNOVATION

I write with regard to the Productivity Commission's draft report on Public Support for Science and Innovation. The Victorian Government endorses a number of the conclusions of the draft report with regard to the research component of the innovation system.

The Victorian Government highlighted in its submission to this study that innovation is fundamental to the long term competitiveness of Australian industry and the living standards of Australians. The draft report has focussed on public support for research, rather than on the innovation system per se. We consider that this has overly narrowed the analysis and the conclusions of the report and ultimately will limit its usefulness in informing public policy in this important field.

The draft report importantly has confirmed that there are significant returns to the economy from investment in research and development. The Commission also highlights the importance of spillovers as a justification for public investment. Yet through its focus on publicly funded research it fails to consider in any depth the impediments to innovation which ultimately enable the maximisation of the return to the economy and society from both Australia's research output and the knowledge that is generated elsewhere in the world. This issue appears to be at the core of the second terms of reference for the Study and we would encourage a much more complete examination of impediments to the effective operation of the innovation system in the final report.

We recognise that innovation systems are dynamic and complex. That they involve multiple interactions between firms, suppliers and customers, knowledge and service providers. As a consequence of these factors and data limitations innovation systems are difficult to analyse. The impediments to the effective and efficient operation of the innovation system often relate to the business environment such as regulation,

taxation and the operation of financial markets or are related to the development of human capital. Identifying and addressing these issues are critical to Australia's future as an innovative economy and may have more significant impacts than our investments in research.

Collaboration and connections are an important aspect of any innovation system. The draft report considers research and industry linkages and endorses models such as Cooperative Research Centres program. One issue that we consider warrants further consideration is the interrelationships between Australia's and international innovation systems and the importance of this in addressing Australia's challenges and building international competitiveness.

These issues are at the core of the National Innovation Agenda that the Victorian Government is advocating. A number of specific issues which we would like the Study to address in the final report are highlighted at Attachment A.

Thank you for this opportunity to comment on this important report. If you have any questions please do not hesitate to contact Dr Diane Sydenham, Director, Innovation and Research, Department of Innovation, Industry and Regional Development on - 9651 9884 or diane.sydenham@iird.vic.gov.au.

Yours sincerely

JOHN BRUMBY MP
Minister for Innovation

Attachment A

DRAFT REPORT ON PUBLIC SUPPORT FOR SCIENCE AND INNOVATION

Specific issues with the draft report are:

Innovation skills and human capital formation

The Victorian Government is concerned that the analysis of the critical issue of skills and human capital development is under developed. The draft report suggests that there do not appear to be any shortages of scientists at present (page 5.6). The Victorian Government submission highlighted current skills needs across a wide range of disciplines (page 50). Our experience with the STI initiative has also highlighted skills shortages in a variety of disciplines.

Further evidence of skills shortages can be found in the 2006 Graduate Outlook Survey[1]. This report has found that employers had trouble sourcing engineering graduates (37.1 per cent overall, and 55.0 per cent of those in the construction/mining/engineering industry). Of those employers who had trouble sourcing graduates from other disciplines, 22.9 per cent had trouble sourcing IT graduates (up from 9.1 per cent in 2005), and 18.6 per cent had trouble sourcing mathematics/statistics/science graduates (up from 6.1 per cent in 2005).

The analysis in the draft report touches on issues identified in the 1995 Karpin Report associated with entrepreneurship and business management skills and identifies more recent research from D'Netto and Bakas (2005) that the effectiveness of management development within Australian organisations is mediocre (page 6.21). Yet when it comes to actions the report suggests that the Commonwealth Government is already intervening in areas under its prime control – management training in the education sector and a small scale small business program. These are long-standing issues which need to be addressed if Australia is to have an effective innovation system and competitive economy. The actions that the Commonwealth Government has in place are clearly not sufficient to address the problems and greater attention needs to be given to these issues by the Commonwealth, states and by business itself.

Research infrastructure

The Victorian Government endorses the findings of the NCRIS Taskforce for funding of research infrastructure and that major public funded research infrastructure should be priced to maximise utilisation, while avoiding congestion. We also endorse the continuing role for the Australian Research Council and National Health and Medical Research Council to provide for operational funding in their research grant allocations. Further, Victoria considers that the Commonwealth Government should meet the full operational costs for all national research infrastructure designated as a major national landmark such as the OPAL Reactor, the Australian Synchrotron and the proposed Mileura International Radio Array for their operational life.

[1] http://www.graduatecareers.com.au/content/view/full/2627

Ethical review for multi-centre research

The Victorian Government has for some time been championing the development of streamlined approval processes from multi-centre trials. We endorse the recommendation but note that there are numerous barriers including that of funding for the governance of such arrangements that need to be addressed.

Business Innovation Support

Businesses are at the core of any innovation system and overall we consider that a major weakness in the draft report is the lack of in depth analysis of the impediments to the effective operation of the innovation system and innovation in business.

We acknowledge that there is a strong justification for Government support for research on grounds of public good and spillovers. However there are a range of market, information, system failures and skill deficiencies that impact on innovation performance of business. Arguably, many of these warrant intervention from Government.

The analysis of business research and innovation support is largely covered in chapters 6 and 9 of the report. Chapter 6 focussing on issues of commercialisation and utilisation and Chapter 9 covers the main business programs.

Chapter 6 appears to confuse issues of commercialisation, knowledge diffusion and broader concepts of innovation and presents a range of information about impediments and justification for support which appear more based on opinion rather than evidence. We note that there were very few submissions from business or organisations such as venture capital firms that are active in commercialisation spheres which may have limited the Commission's analysis.

Chapter 9 considers the main business research and innovation programs. We support the Commission's view that the taxation concession for research and development needs reform. But without detailed modelling of the proposed approach we are unable to endorse the detail of the Commission's finding. We do consider that there appears to be merit in relaxing beneficial ownership requirements and the expenditure and turnover thresholds for the taxation offset scheme.

There also appears to be merit in more thoroughly examining the treatment of tax losses to businesses and consider that this is an area of reform that could stimulate private investment in R&D and innovation.

With regard to the Commercial Ready program we consider that it has not been running long enough for the Commission to suggest that its objectives are being compromised by the inclusion of commercialisation activities. The program has brought together a number of programs in the research, development and commercialisation space. This appears to have simplified application processes for companies. The program recognises that firms do not conduct research and development in isolation of other commercialisation activities and that financing for proof of concept may for example be as significant a barrier to a firm as financing research and development.

With regard to the Cooperative Research Centres (CRC) program we would endorse the return of public good CRCs to the program, so long as other reform measures to strengthen the management and operations of CRCs that have been introduced in recent years are retained.

While we support in-principle that public funding should be directed towards areas where public benefits will be maximised, we are uncertain of the practicality of the Commissions finding that "the share of public funding should be aligned to the level of social benefits provided by each CRC, thereby reducing some of the large rates of subsidy to business collaborators".

Firstly, the proportion of public funding will always be higher for "public good" CRCs than for industry CRCs as matching resources are typically provided by public organisations including State Governments. The second issue is that while CRC applicants will anticipate the nature of returns – social, environmental and economic – it is impossible to determine the level of public or private benefit that will be generated in advance of the conduct of the research itself, and the knowledge diffusion and commercialisation period that follows. Recent CRC evaluations suggest that the time lag between the commencement of a CRC and measurable end impacts is generally between five and ten years.

The Victorian Government would also endorse the proposal for Federal Government to consider the introduction of a simple complementary program to the CRC program with broader collaborative goals. In developing such a program we consider that it should focus on the facilitation of market "pull" and access to problem solving research, development and knowledge by industry and other research users, rather than additional measure to "push" technological inventions and capability from the research sector to users.

Research and Development in the Primary Production Sector

The Victorian Government considers that the Rural Industry Research and Development Corporation (RIRDC) program is a very successful government – industry partnership research, development and extension (R,D&E) model for a sector that is based generally on small enterprises. We are pleased the report reinforces that the R, D & E in rural industries delivers significant economic, environmental and social benefits both to industry and the community. The Victorian Government concurs with the Commission's recognition of the difficulties of demonstrating economic return due to attribution and other factors, and that case studies provide one useful though not perfect form of evidence of the gains generated in measuring impact. We support the beneficiary-pays approach to public support funding for RIRDCs as described in the report.

The report highlights the complexity of the R, D and E system and need for incremental improvements which reinforces the requirement for a national approach to primary industries' R,D & E. Government agencies and industry need to work together to develop a more efficient and effective national research capability. It is important that strategy is aligned with capability so that R D & E is focused on strategically important issues and industries for their long term sustainability. While

generation and adoption of knowledge and new technologies is a key driver of productivity in primary industries it is increasingly important to tackle broader public good issues such as natural resource management, climate change and biosecurity. The national research framework also needs to be aligned with regional development and local extension to achieve rapid uptake of innovation by industry. There could be benefits in undertaking national stocktakes to identify opportunities for cooperative alliances and infrastructure consolidations and developing solutions to impediments in planning conduct and delivery of RD&E.