

## **Introduction**

The Federation of Australian Scientific and Technological Societies (FASTS) is the peak representative body for 60,000 scientists and technologists.

FASTS was established in 1985 and has approximately 65 member organisations. FASTS is well known in Parliamentary circles as the initiator and co-ordinator of the highly successful ‘Science Meets Parliament’; an annual two day event involving the majority of Parliamentarians and approximately 250 working scientists and technologists. The President of FASTS is also a member of the Prime Minister’s Science, Engineering and Innovation Council (PMSEIC).<sup>1</sup>

## **Linkages between Science and Government**

FASTS believes the necessity for all levels of Government to be well informed on science has never been higher:

- \* Science and technology are ubiquitous in our social, environmental and economic domains;
- \* Science, mathematics and technology underpin economic success and innovation in the global knowledge economy; and
- \* The capacity of Governments to make good policy in a wide range of areas including health, environment, agriculture, defence, communications and quarantine is increasingly dependent on science.

FASTS believes good linkages and dialogue between science and Government is vital. That is why, for instance, FASTS initiated ‘Science meets Parliament’ and we have advocated the establishment of Parliamentary Fellowships to place a number of scientists in Parliament to assist committees and politicians. Accordingly, we strongly endorse the idea of a Chief Scientist providing high-level advice to the Prime Minister, Cabinet and relevant Ministers.

## **The Office Of The Chief Scientist**

The Office of the Chief Scientist was created by the Hawke Labor Government in 1989. Similar positions have long been in existence in other countries. In the USA, the position of the science advisor to the President of the United States was created in 1951 under President Truman.<sup>2</sup> The Office of the Chief Scientific Advisor to the UK Government was established in 1964.

The first two Chief Scientists, Professor Ralph Slatyer (1989 – 1992) and Professor Michael Pitman (1992 – 1996) were located in the Department of Prime Minister and Cabinet and were full time-positions. At that time, the science group in PMC around the Chief Scientist had responsibilities for the Australian Technology Science and Engineering Council (a precursor to PMSEIC) and, FASTS understands, the Cooperative Research Centres (CRCs) program.

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<sup>1</sup> The then FASTS President, Professor Chris Fell, was chair of the independent working group that prepared the paper, *Beyond Kyoto – Innovation and Adaptation* which was presented to the 9<sup>th</sup> meeting of PMSEIC on 5 December 2002.

<sup>2</sup> [http://www.ostp.gov/html/\\_whatwedo.html](http://www.ostp.gov/html/_whatwedo.html)

In 1996, the Government changed the position to part-time with the Chief Scientist having a contract with the Minister of Science to provide high level scientific advice to the Prime Minister and the Minister of Science.

## **The Status of the Chief Scientist**

Currently, the Chief Scientist is not a Statutory position but has statutory recognition in the Australian Research Council Act 2001 where the position is designated as a member of the ARC Board (s.12(b)(ii)).

The Chief Scientist is also the Executive Officer of the Prime Minister's Science, Engineering and Innovation Council (PMSEIC) and chairs PMSEIC's Standing Committee (the non-Ministerial members of the Council).

PMSEIC was established in 1997 and replaced the Australian Science, Technology and Engineering Council (ASTECC)<sup>3</sup>. PMSEIC is not a statutory entity and FASTS are not aware of it having any statutory recognition.

## **Attributes of a Chief Scientist**

FASTS believe that key attributes that should inform selection of a Chief Scientist must include;

- \* A distinguished scientist with a proven track record in research in either universities, public sector or not-for-profit research agencies or industry;
- \* wide respect within science for their contributions;
- \* Should be an actively practicing scientist (as distinct, say, from a former scientist who has worked in a Government Department in a non-research role for many years); and
- \* Capacity to work across portfolios with a broad perspective.

For the record, FASTS believes Dr Batterham is a first rate scientist with a distinguished record of high impact, peer reviewed academic publications and other important outputs including patents.

He has demonstrated through *A Chance To Change* and other contributions that he is alive to a wide range of issues in science including funding, commercialization, management and IP which have served to advance the national science and technology agenda.

Unsurprisingly, the science community is highly heterogeneous in its views and while there is widespread respect and acknowledgement of Dr Batterham's championing of science and technology and role in the Government developing *Backing Australia's Ability* there is a view that his emphasis on commercialization has understated the value of basic and strategic research.

## **The Role of the Chief Scientist**

FASTS believes the key functions of the Chief Scientist should include;

- \* Advocate of science to Government
- \* Provision of high-level, independent advice to the Government through PMSEIC, reports, reviews and direct consultation.

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<sup>3</sup> The Hon. John Howard, Prime Minister, *Prime Minister's Science, Engineering and Innovation Council, Media Release*, 18 December 1997

For the role to be carried out effectively, it is important the Chief Scientist has good linkages and strong communication with funding agencies, sector and industry groups and other stakeholders. The Chief Scientist should also maintain good knowledge of cutting edge developments in science throughout their tenure.

FASTS believes it is appropriate the Chief Scientist be an *ex officio* member of the Board of the Australian Research Council and serve on inter-Governmental committees with broad co-ordinating or strategic functions.

However, the Chief Scientist should be independent of the operations and assessment of individual funding decisions and have no bureaucratic or line management responsibilities.

This model is different to that operating in the UK where the Chief Scientific Advisor heads the Office of Science and Technology (OST), which in turn is located in the Department of Trade and Industry.

In addition to its advisory functions for the UK Government, OST has a significant role in the management and direction of British research as it funds the seven UK Research Councils and reviews the accounts and operational objectives of the Councils.<sup>4</sup>

This model implies a full recognition of the importance of science and technology for economic, social and environmental policy and FASTS is well aware of the crucial role that eminent Chief Scientific Advisors have made in UK science debates, notably Lord May, in recent years.

We do, however, have an in-principle concern with this sort of model.

FASTS believes a plurality of funding agencies and approaches is an important feature of a robust national research effort. Accordingly, we believe there is a risk that positioning key funding agencies under one office has the potential for unhealthy convergence on too limited a range of research approaches, timescales and foci.

## **Basis of Employment**

FASTS believes the Office of the Chief Scientist should be restored to the Department of Prime Minister and Cabinet to facilitate a Whole-Of-Government approach.

FASTS recommends the position of the Chief Scientist be full-time. This reflects the importance of science and technology for economic, social and environmental considerations but also the crucial role of good science informing policy in a plethora of areas.

Not only is the scope of the responsibilities of the Chief Scientist immense, but having a full-time Chief Scientist sends a clear message of the importance that Government places on this role.

The Government's rationale for a part-time Chief Scientist is that it allows for close and continuing contact with industry and research communities'.<sup>5</sup>

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<sup>4</sup> Department of Trade and Industry, Departmental Report 2003, 3.13, 3.14,  
<http://www.dti.gov.uk/expenditureplan/report2003/>

While FASTS respects the policy intent of the Government's rationale, we believe that the scope and importance of the role is best reflected in a full time position. Moreover, we do not believe a full time position precludes close and continuing contact with industry and researchers. If, as suggested above, a Chief Scientist is appointed who is an active, or very recently active, distinguished researcher they will almost certainly have close and continuing networks in place anyway.

The Committee may also wish to consider whether the Office of the Chief Scientist should be engaged on a statutory, contract or departmental officer basis.

On balance, FASTS believes there are good grounds for the Chief Scientist to be a statutory position with defined reporting requirements and powers and selection criteria. Such an approach has the advantage of;

- \* Providing closer linkages to pursue whole-of-Government advice;
- \* providing some surety the position will be ongoing and not abolished at executive whim (although this does not ensure funding); and
- \* Providing for public accountability.

Contracts have the advantage of providing for flexibility but there are questions as to selection criteria and processes and performance requirements. Direct Ministerial appointments are by no means unusual and in FASTS view many appointments to boards and authorities have been sound. Dr Stocker and Dr Batterham have both been highly credible appointments, for instance. While FASTS is not aware of the performance requirements in current or previous contracts between the Minister and the Chief Scientist it is clear that Dr Batterham has generated a considerable body of advice, reviews and assessment which are in the public domain.

There are advantages to employing the Chief Scientist as a Senior Departmental Officer covered by the Public Service Act in terms of accountability and selection processes. However, FASTS believes a PSA appointment may impinge on the flexibility and capacity of the Chief Scientist to provide advice of a different nature to the Department.

## **Status of PMSEIC**

Consideration of the status of the Office of the Chief Scientist cannot be considered without reference to PMSEIC.

As noted above, the Chief Scientist is currently not a statutory position although it has statutory recognition. PMSEIC appears to have neither a statutory basis nor statutory recognition.

It may be somewhat anomalous then to make the Chief Scientist a Statutory position if the primary instrument by which their advice is given – PMSEIC – has no statutory status.

There does not appear to a pressing reason to make PMSEIC a statutory entity given its current advisory functions. To do so may confer a somewhat greater aura of independence, long term certainty and legislative basis of powers, objectives, reporting and selection but

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<sup>5</sup> <http://www.dest.gov.au/ChiefScientist/>

may also add some rigidity – which is not necessarily a bad thing - to an entity that should be advisory and non-bureaucratic.

If, however, the functions of PMSEIC were enhanced (as discussed below) and it had the capacity to initiate scientific analysis and modelling where relevant, then there may be a stronger case to consider making PMSEIC a statutory entity.

## **Conflict of Interest**

Issues around conflict of interest are well understood in the scientific and research communities and are routinely dealt with professionally and competently.

Many funding programs are contestable and may involve expert peer review of applications, notably with ARC, CRC and NHMRC programs.

The purpose of peer-review and contestability is to identify and support excellence within defined criteria. It is well understood that not every application can or should be successful. For instance, the success rate of key ARC programs in their most recent rounds were 27% for Discovery-Project, 49% for Linkage-Project and 51% for Linkage-Infrastructure and Equipment. It is a fact of life in science and research that credible applications from well qualified people will not be successful in such processes.

Good faith is essential for credible expert peer review which is why funding organisations such as the ARC have developed sound guidelines and processes for managing conflict of interest, including appeals processes.

Conflict of interest is understood more broadly than pecuniary interest and typically includes;

- a) direct involvement in the application as Chief Investigator or Associate Investigator;
- b) direct or potential involvement due to a personal financial interest in the outcome of the granting process;
- c) potential involvement as a scientific departmental/institutional colleague
- d) perceived involvement due to a family/personal relationship, either currently or during the past five years, and/or
- e) any other perceived conflicts.<sup>6</sup>

Any person selected as the Chief Scientist will have the potential for conflict of interest irrespective of whether they are full or part time, given that a recently active scientist will have prior involvements and may be looking to their future prospects after their term concludes.

The real issue is whether there are good processes - such as those utilized by the ARC and NHMRC - for declaration of interests.

FASTS are not aware of any circumstances where the current, or any former, Chief Scientist has not complied with conflict of interest processes or otherwise acted in bad faith by not making clear any interests.

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<sup>6</sup> NHMRC, *Program Grant Funding Policy For Funding Commencing In 2005*, p. 30

## **Cooperative Research Centres**

FASTS has a general policy of not commenting on competitive grant outcomes. However, we can and do comment on the policy intent of programs and whether there are sufficiently transparent and correct processes in place within funding agencies.

FASTS are on the public record as not supporting the Government's policy shift in the selection guidelines for CRCs.

While the new guidelines do not preclude public good research, the change in emphasis in the current CRC round may result in the effective exclusion of potential CRCs with strong environmental and social outcomes. It is not at all clear where this extremely important sector, and the first of our national research priorities, will be picked up in a strategic fashion within the Australian research profile.

FASTS believes the nation needs a strategic overview of where research investment is heading and how this relates to national research priorities. While research should never be driven from the top down, we do need to identify emerging gaps and opportunities in strategic, long-term research.

FASTS believes this could be a role PMSEIC undertakes. If so, this enhancement to PMSEIC's role may be sufficient to warrant giving it a statutory basis (as discussed above).

Issues regarding policy and guidelines should not be conflated with questions of perceptions of conflict of interest of Dr Batterham in his role as a member of the CRC selection committee.

FASTS are aware there are policies and processes for dealing with conflict of interest in the CRC selection committee. We can see no reason why this should not be a publicly available document.