Research Agencies Legislation Amendment Bill 2002
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Research Agencies Legislation Amendment Bill 2002

Date Introduced: 21 March 2002
House: House of Representatives
Portfolio: Education, Science and Training
Commencement: Royal Assent

Purpose

To amend the Australian Institute of Marine Science Act 1972 and the Australian Nuclear Science and Technology Organisation Act 1987 so as to make it easier for the Australian Institute of Marine Science (AIMS) and the Australian Nuclear Science and Technology Organisation (ANSTO) to pursue business opportunities arising from their research and expertise.

Background

In 1990 the Commonwealth Government set external earnings targets for the three science agencies – CSIRO, AIMS and ANSTO. The specific aim of the targets was to encourage closer relations between the researchers, industry and other potential users. It was foreseen that this would, among other things, lead to the benefits arising from research being more available to Australian industry. The external earnings targets are negotiated by the three public sector research institutions in the context of their Triennium Funding Agreements with the Government. Recently, the Chief Scientist, Dr Robin Batterham, carried out a review of the targets. His findings have not yet been released.

On 29 January 2001 the Prime Minister launched the Government’s innovation action plan entitled Backing Australia’s Ability. The plan is built around three concepts:

- strengthening Australia’s ability to generate ideas and undertake research
- accelerating the commercial application of those ideas, and
- developing and retaining Australian skills.

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The innovation plan was generally well received by the Australian science and research communities. A ministerial committee chaired by the Prime Minister has been set up to oversee the implementation of the plan. Additional funding of $2.9 billion is to be provided over a five-year period, with $159.4 million to be spent in the first year (2001-02), increasing to $946.6 million in 2005-6. The plan requires business and research institutions to spend $6 billion over the same period to attract its grants and incentives.

Recent media reports suggest that the innovation program is moving more slowly than anticipated, and that one of the Government’s challenges is to encourage greater cooperation between industry and research institutions. Without this, the Government may not achieve its goal of adding $6 billion in additional private sector spending on research and development during the five years of the innovation plan.

Backing Australia’s Ability proposed a number of initiatives for public sector research institutions, including:

- strengthening research links between public sector science and industry bodies, and
- providing seed-funding to take promising research to the stage of commercial viability.

The amendments proposed by this Bill address the issues of commercialising the research carried out by the Australian Institute of Marine Science (AIMS) and the Australian Nuclear Science and Technology Organisation (ANSTO). In his second reading speech on this Bill, the Minister for Science, Hon Peter McGauran, said that ‘Backing Australia’s Ability identified the need to examine barriers to the commercialisation of government funded research. As part of its work on this matter, the CSIRO, AIMS and ANSTO acts were examined to ensure that they do not inhibit the commercialisation of research developed by these agencies. The Australian Government Solicitor found that both AIMS’s and ANSTO’s legislation were most restrictive in this context, imposing commercialisation restrictions.’ The Bill proposes to facilitate commercialisation by removing such restrictions.

Australian Institute of Marine Science (AIMS)

AIMS is a Commonwealth statutory authority established by the Australian Institute of Marine Science Act 1972. Its mission is to ‘generate the knowledge to support the sustainable use and protection of the marine environment through innovative, world-class scientific and technological research’. AIMS was established by the Federal Government in 1972 in recognition of the growing importance of the marine sector to Australia. Its first major laboratory was opened in 1977 at Cape Ferguson, near Townsville. In 1995 the Institute opened a small laboratory in Dampier, Western Australia, to provide a base for its growing research program in north west Australia. This program was established to support the conservation and management of the north and west marine zones of Australia, an area that has high conservation value and is rich in oil, gas, fisheries and minerals. In 2000 the AIMS Council decided to close the Dampier facility and disperse the resources.
between new facilities in Perth and Darwin. It is anticipated that these moves will provide better contact with clients requiring AIMS services.9

Currently AIMS research is based around five projects that focus on:

- predicting climate impacts on marine ecosystems
- exploring and conserving marine biodiversity
- sustaining marine living resources
- measuring human impacts in coastal marine ecosystems, and
- deriving benefits from marine biotechnology.10

The clients of AIMS include industries (fisheries, mining, petroleum and tourism), researchers and educators, federal, state and local governments, and the Australian community. Among the areas that AIMS has identified as research priorities are the sustainable development of aquaculture industries and exploitation of marine genetic resources for pharmaceutical and commercial use. Marine research also contributes to the planned management of Australia’s coastal environments by identifying and quantifying the impact of various human activities (such as agricultural run-off, pesticides, oil freshwater diversion, aquaculture effluents) on the ecology of coastal habitats. According to its latest Annual Report, AIMS has commissioned a small amount of market analysis related to the potential commercialisation of its technologies11 and proposes to incorporate a company to take its shellfish toxin detection technology to market in an appropriate commercial alliance.12 In 2000-2001 AIMS’s external earnings target was 20 per cent of total revenue adjusted for unrelated revenue. It raised $4.4 million in external earnings in the year ending 30 June 2001.13

Australian Nuclear Science and Technology Organisation (ANSTO)

ANSTO is Australia’s national nuclear research and development organisation. It was established by the Australian Nuclear Science and Technology Organisation Act 1987. ANSTO has a staff of approximately 800 and is located at the Lucas Heights Science and Technology Centre, in southern Sydney. The science and technology centre occupies 70 hectares and is surrounded by a 1.6 km buffer zone. ANSTO operates Australia’s only nuclear reactor. The reactor is used to produce radioactive products for use in medicine and industry. It is also used extensively as a source of neutron beams for scientific research and to irradiate silicon for semiconductor applications.14 According to the Minister for Science, Hon Peter McGauran, each year almost half a million Australians depend on a nuclear medicine procedure using reactor-derived isotopes.15

A licence to construct the replacement research reactor at Lucas Heights was issued by the nuclear regulating authority (ARPANSA) on 5 April 2002.16 In July 2000 the contract to
construct the replacement reactor was awarded to an Argentine company, INVAP, working with an Australian joint venture subcontractor comprising John Holland Construction and Engineering, and Evans Deakin Industries.\textsuperscript{17} It is expected that the replacement reactor will be in operation by 2005. Sites for the storage of low level and intermediate level radioactive waste from the reactor have yet to be determined.\textsuperscript{18} Greenpeace has challenged the granting of the construction licence in the Federal Court, saying that there are serious problems with ANSTO’s nuclear waste management. On 17 April 2002 the Federal Court granted Greenpeace an expedited hearing for May 2002.\textsuperscript{19}

ANSTO advises the Commonwealth Government on issues associated with the nuclear fuel cycle and the operation of nuclear facilities. It also supports industry through the development and application of nuclear science based technology and associated capabilities. ANSTO’s mission statement consists of four components, one of them being ‘to apply … technologies [resulting from research] and other relevant, unique capabilities to focussed research and development and other scientific activities to increase the competitiveness of Australian industry and improve the quality of life for all Australians.’\textsuperscript{20}

The principal source of ANSTO’s funding is parliamentary appropriations. In 2000-2001 ANSTO generated $35.8 million from external services (up from $32.2 million in 1999-2000), representing 29.5 per cent of total income (the external earning target was 20 per cent). Despite this, the operating result for ANSTO in 2000-2001 was a $5.3 million deficit. According to the Chairman’s Report for 2000-2001, the deficit was an outcome of ANSTO’s limited ability to respond to decreasing parliamentary appropriations and various new government charges, while maintaining the operation of facility safety and the core competencies of the organisation.\textsuperscript{21} ANSTO’s response to these funding difficulties was to increase external earnings, improve efficiencies and reduce expenditure on research and development.\textsuperscript{22} The Government has agreed that ANSTO should receive additional funding to cover the increased costs associated with regulation, that backlog maintenance funding be provided for three years, and that there be no further cuts to ANSTO’s research funding.\textsuperscript{23}

ANSTO has a range of commercial activities.

\begin{itemize}
  \item It leases some of its property at the ANSTO Technology Park to high technology companies and public sector organisations.\textsuperscript{24} It earned $2.3 million from land management in 2000-2001.\textsuperscript{25}
  \item In 2000-2001 sales of radiopharmaceuticals and radioisotopes for medical, industrial and research purposes earned $17.99 million. Export sales grew by 19 per cent to $2.5 million to make up 14.2 per cent of total revenue from these products.\textsuperscript{26}
  \item In July 2000 an ANSTO business unit called Sulfide Solutions was established to derive value from ANSTO’s previous research efforts in the Managing Mine Wastes Project.\textsuperscript{27}
\end{itemize}
Main Provisions

Amendments to the *Australian Institute of Marine Science Act 1972* (AIMS Act)

The proposed amendments to the AIMS Act are in three parts. Part 1 makes amendments to the function and powers of AIMS, Part 2 amends the finance provisions of the AIMS Act and Part 3 makes a number of miscellaneous amendments that have the effect of providing AIMS with greater flexibility in its operations.

Amendments to the functions and powers of AIMS

**Item 1** inserts a definition of ‘application and use’ in section 5. The expression is intended to be interpreted broadly and, in particular to mean non-marine as well as marine application and use.

Subsection 9(1) of the AIMS Act deals with the functions of the Institute. **Items 2 and 3** repeal paragraphs 9(1)(a) and (f) and substitute new paragraphs that will have the effect of allowing AIMS to carry out research and development (*proposed new paragraph 9(1)(a)*), and to collect and disseminate information (*proposed new paragraph 9(1)(f)*), relating to both marine science and marine technology and the application and use of marine science and marine technology.

The effect of **item 4** is to ensure that AIMS is able to produce and sell goods and provide services in connection with the application and use of marine science and marine technology.

Subsection 9(2) of the AIMS Act deals with the purposes for which the Institute may carry out its functions. **Item 6** provides that AIMS may perform its functions to the extent that they do not exceed the functions conferred on it by Parliament through legislation. **Items 7 and 8** add *proposed new paragraphs 9(2)(g), (h) and (i)* and provide AIMS with additional purposes for carrying out its functions. **Item 8** inserts a ‘catch all’ provision to include purposes such as quarantine, fisheries in Australian waters beyond territorial limits, and telecommunications for the purposes of section 9 of the AIMS Act.

**Item 10** provides that the Institute may display material and give lectures to the general public and others, about both marine science and marine technology and the application and use of marine science and marine technology.

Amendments to the finance provisions of the AIMS Act

**Items 12-14** add new definitions of ‘associated company’, ‘ borrowings’ and ‘Finance Minister’ to section 5. An ‘associated company’ is defined as one in which AIMS controls 15 per cent or more of the maximum number of votes that might be cast at a general meeting of the company.
Item 15 inserts proposed new paragraph 10(2)(ha) which provides that, in performing its functions, AIMS may lend money to its associated companies. Proposed new paragraph 10(2)(hb) provides that AIMS may, in performing its functions and with the written approval of the Finance Minister, also provide guarantees for the benefit of its associated companies. The purpose of these proposed amendments is to give AIMS and its associated companies the power to borrow money to finance their commercial activities, and to give AIMS the ability to make and guarantee loans to its associated companies.

It is interesting to compare this with the corresponding provisions in the CSIRO’s enabling legislation, the Science and Research Industry Act 1949 (CSIRO Act). The functions and powers of CSIRO are set out in sections 9 and 9AA of the CSIRO Act. Under this Act, CSIRO may join in the formation of a partnership or company but may not, without the written approval of the Minister, hold a controlling interest in a company. If the Minister approves and CSIRO commences to hold a controlling interest in a company, then the Minister must table in each House of Parliament within 15 sitting days, a statement setting out the particulars of, and the reasons for, the holding of that controlling interest. In addition, where CSIRO holds a controlling interest in a company, the Organisation must ensure that the company does not do any act that is outside the functions of the Organisation. Similar provisions are not provided in the legislation governing AIMS (or ANSTO).

At present AIMS must seek the approval of the Minister before it enters into a contract which involves payment by the Institute of an amount exceeding $100,000. Item 20 raises this limit to $1 million, or a higher amount if a higher amount is specified in regulations. One effect of this proposed amendment is to delegate the power to limit a financial commitment by AIMS to the executive. This is similar to the provisions in the CSIRO Act where a contract value threshold higher than the $250,000 that is prescribed in section 50 of the Act, may be prescribed in regulations.

Item 21 inserts proposed new sections 42A, 42B, 42C, 42D and 42E that provide for AIMS to:

- borrow from the Commonwealth (proposed new section 42A)
- borrow from persons other than the Commonwealth with the written approval of the Finance Minister. The money may be borrowed wholly or partly in foreign currency (proposed new section 42B)
- obtain Commonwealth guarantees from the Finance Minister for borrowings made by the Institute (proposed new section 42C). Under proposed new subsection 42C(2), the Finance Minister may determine in writing that AIMS’s borrowings under section 42B are guaranteed by the Commonwealth
• give security over the whole or part of the Institute’s assets for any borrowings made under section 42A or 42B, or guarantee under section 42C (proposed new section 42E).

Item 22 affirms that stamp duty exemptions apply to AIMS in relation to its borrowings.

The effect of these amendments is that AIMS will have more flexibility to act like a private sector company, while retaining its exemptions from stamp duty and having its debts guaranteed by the Commonwealth.

Proposed amendments giving AIMS greater flexibility in its operations

Items 24-28 remove the requirement for the Director or Acting Director of AIMS or any staff member, whether full-time, temporary or casual, to take an oath or affirmation of allegiance before starting employment with the research institution. Item 31 removes the Schedule which set out the form of the oath or affirmation that was formerly required. These amendments are in line with the Public Service Act 1999 which no longer requires APS employees to make an oath or affirmation of allegiance.28

At present the Minister must approve the terms and conditions under which AIMS may make available any discovery, invention or improvement of any process, apparatus or machine made by an officer or employee of the Institute in the course of his or her official duties. Item 29 removes this requirement giving the management of AIMS greater flexibility to determine its own terms and conditions. Item 30 removes the requirement for Ministerial approval for bonuses that Council may pay officers, employees or persons working on behalf of AIMS for useful discoveries or inventions made by them.

By way of contrast, section 54 of the CSIRO Act dealing with inventions etc. by officers provides that

(1) A discovery, invention or improvement of or in any process, apparatus or machine made by an officer of the Organisation in the course of the officer’s official duties is the property of the Organisation.

(2) An officer of the Organisation shall not, except with the consent in writing of the Chief Executive, make application for a patent for an invention that is made by the officer in the course of the officer’s official duties or that relates to any matter or work connected with the officer’s official duties.

In addition, the CSIRO Act still requires ministerial approval before the Organisation can pay bonuses to officers or people working on behalf of the CSIRO, for discoveries or inventions made by them (paragraph 9AA(1)(d) of the CSIRO Act).

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Amendments to the *Australian Nuclear Science and Technology Organisation Act 1987* (ANSTO Act)

The amendments to the ANSTO Act are in two parts. Part 1 amends some of the functions and powers of ANSTO to allow the Organisation to engage in a range of commercial activities, and Part 2 increases the financial limit on contracts that ANSTO may enter into without ministerial approval.

**Item 1** adds a definition of ‘application and use’ for the purposes of the ANSTO Act. This allows ANSTO to apply and use non-nuclear as well as nuclear science and technology.

**Items 2 and 3** add the ‘application and use of nuclear science and nuclear technology’ as a function of the Organisation. The effect of **items 7 and 8** is to clarify that ANSTO can produce and acquire goods, as well as providing and selling goods and providing services in connection with nuclear science and nuclear technology or the application and use of nuclear science and nuclear technology.

Paragraph 5(1)(ea) provides that one of ANSTO’s functions is to make available to other persons, on a commercial basis, the knowledge, expertise, equipment, facilities [resources and property] of the Organisation by

(i) providing training and management expertise; or
(ii) selling or leasing equipment; or
(iii) leasing land [buildings] and facilities; or
(iv) taking any other action that the Organisation thinks appropriate.

Paragraph 5(1)(ea) is amended by **items 11 and 12** to add ‘resources and property’, and ‘buildings’ to the list of things that ANSTO may make available on a commercial basis.

The effect of **item 14** is to clarify ANSTO’s ability to construct and lease buildings to third parties.

At present ANSTO must seek the approval of the Minister before it enters into a contract which involves payment by the Organisation of an amount exceeding $5 million. **Item 16** does not increase the amount but provides that regulations may specify a higher amount. This is similar to the change made to the AIMS Act by **item 20**, and brings ANSTO in line with CSIRO where section 50 of the CSIRO Act provides that regulations can prescribe a higher contract value threshold than that prescribed in the Act before Ministerial approval is needed.

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Concluding Comments

The effect of the amendments proposed by this Bill is to provide AIMS and ANSTO with a greater degree of independence from ministerial direction. Nevertheless both statutory bodies will continue to be subject to government control and supervision by way of their own enabling legislation and the provisions of the Commonwealth Authorities and Companies Act 1997 (CAC Act). The Bill does not alter the situation that the principal source of funding for both AIMS and ANSTO will continue to be parliamentary appropriations. External earnings at present make up about 20 – 30 per cent of each agency’s budget and setting an external earnings target is part of the negotiations for each agency’s Triennial Funding Plan. AIMS is given the power to borrow money from lenders with the approval of the Finance Minister. There are provisions for the Commonwealth to guarantee these loans.

AIMS and ANSTO will continue to be accountable to Parliament through their responsible Minister. Accountability of the two public sector research institutions is provided through the preparation of a corporate plan, annual report and indicators of financial and non-financial performance as well as external audit. The content of AIMS’s and ANSTO’s annual reports, including their financial statements will continue to be governed by Schedule 1 of the CAC Act and Orders made under the CAC Act.

Endnotes


5 Michelle Grattan, ‘$3 billion jolt to get Australia thinking again’, Sydney Morning Herald, 30 January 2001; Backing Australia’s Ability: an innovation action plan for the future, Canberra, 2001, p. 5.


9 op cit, p. 2.


11 ibid., p. 48.

12 ibid., p. 25.

13 ibid., p. 85. AIMS’s external earning target has varied over time. In 1990-1991 the AIMS Annual Report stated that the external earning target had been set by the then government at 25 per cent from July 1990 and 30 per cent of total appropriation from July 1991. In 1990-1991 AIMS raised 24 per cent of its total appropriation from external earnings. In 1999 AIMS’s external earnings ratio was 23 per cent. This fell to 20 per cent in 2000 and 2001. (AIMS Annual Report 2000-2001, p. 84).


16 Hon Peter McGauran, Minister for Science, ‘Minister hails Lucas Heights decision’, Media Release, 5 April 2002. ARPANSA is the Australian Radiation Protection and Nuclear Safety Agency.


20 Australian Nuclear Science and Technology Organisation, Annual Report 2000-2001, p. iv. The four components of ANSTO’s mission statement are:

- to provide expert scientific and technical advice across the nuclear fuel cycle to government and to support Australia’s national strategic and nuclear policy objectives
- to operate large nuclear science and technology based facilities in Australia and overseas for the benefit of industry and the Australian research and development community, including postgraduate students and staff in higher education
- to undertake research on specific topics to advance the understanding of nuclear science and the nuclear fuel cycle

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• to apply resulting technologies and other relevant, unique capabilities to focussed research and development and other scientific activities to increase the competitiveness of Australian industry and improve the quality of life for all Australians

21 ibid., p. 1.
22 ibid., p. 1.
23 ibid., p. 2.
26 ibid., p. 38.
27 ibid., p. 38.
28 Section 22 *Public Service Act 1999*. 

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