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## EXECUTIVE SUMMARY WITH RECOMMENDATIONS

### Background to inquiry

On 3 September 1997, the Government announced its intention to build a new 20 megawatt research reactor at Lucas Heights at a cost of \$286.4 million. It also announced that an additional \$88 million had been set aside to remove spent fuel from Lucas Heights and to meet the cost of reprocessing the rods offshore. This announcement of plans for a new reactor, followed by a tendering process and the choice of the Argentinian company, INVAP S.E., as the successful tenderer sparked debate about the overall project.

It was against this background of controversy that the Senate decided to establish a committee of inquiry to examine the need for a new reactor; the tendering process and the contract; health and safety matters and nuclear waste management issues. Thus, on 15 August 2000, the Senate resolved to establish the Select Committee for an Inquiry into the Contract for a New Reactor at Lucas Heights.

### HIFAR

Australia's only nuclear research reactor, HIFAR, is one of a number of research reactors operating around the world that belongs to a class of ageing reactors. Construction on this reactor commenced in 1956, it achieved fission power in 1958 and began routine operation in 1960. It is one of six DIDO-class reactors designed in the 1950s and represents the technology of that era.

HIFAR was barely 20 years old when questions were raised about its future and the possibility of replacing it with a new reactor. But it was not until the 1990s, when HIFAR increasingly began to show its age, that the decision about a replacement reactor assumed greater priority.

In 1992, the Australian Science and Technology Council (ASTEC) identified HIFAR as one of seven major national facilities for likely development or replacement. The following year a review was conducted under the chairmanship of Professor Ken McKinnon to evaluate the benefits and costs of a new research reactor. Both ASTEC and the McKinnon Review accepted that HIFAR was no longer a leading research facility and acknowledged that a new more modern research reactor would enhance neutron beam research in Australia and the production of isotopes for use in medicine and in industry.

Both reports, however, recommended that a full and rigorous evaluation of any proposal to build a new reactor should be undertaken before proceeding with further plans.

**The Committee notes that the decision in September 1997 to build a new research reactor was taken six years after the ASTEC report on major national facilities and five years after the McKinnon Review and without heeding their advice for further investigation. In other words, since 1992, there has been no**

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**comprehensive and independent study to establish funding priorities for Australia’s major national scientific facilities and no full and thorough public inquiry into the need for a new reactor or the most suitable location for such a facility.**

**The Committee believes that the failure by the Government to hold a full public inquiry into the need for a new reactor as recommended by the McKinnon Review has meant that the various issues identified in that detailed and intensive review have never been adequately and independently assessed.**

## **PART I—THE NEED FOR A NEW RESEARCH REACTOR**

Overall, participants to the inquiry accept that HIFAR belongs to a bygone era and that further efforts to upgrade the outdated technology would not be a wise use of resources.<sup>1</sup> The Committee agrees. The question then arises whether it should be replaced with a new facility.

### **The new research reactor and scientific research**

ANSTO’s main charter is to undertake research and development in relation to nuclear science and nuclear technology. This also includes research and development into the production and use of radioisotopes, and the use of isotopic techniques and nuclear radiation, for medicine, science, industry, commerce and agriculture.<sup>2</sup>

In announcing the Government’s decision to replace HIFAR with a new reactor, Mr Peter McGauran, the Minister for Science and Technology, stated that the new facility would support ANSTO’s ‘nationally important work’ in areas such as environmental studies, agriculture and in assisting industry. The proposed reactor would also encourage scientific research and higher education through better access to a modern, versatile neutron source.<sup>3</sup>

Evidence presented to the Committee indicates that neutron beam research has wide application across a number of scientific fields and has particular relevance to areas such as biotechnology and information technology. Businesses and research institutes that rely on HIFAR for both research and analysis regard the facility as a valuable research tool and strongly support the construction of a new reactor. They claim it will provide a research facility that will enable young scientists and engineers to gain the

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1 See for example, Mr John Boshier, Institution of Engineers, *Committee Hansard*, 27 October 2000, p. 275; IEAust, submission no. 67; Professor John Patterson, submission no. 94. See also Ms Jean McSorley, *Committee Hansard*, 25 October 2000, p. 45; Mr Stephen Campbell, *Committee Hansard*, 26 October 2000, p. 121.

2 *Australian Nuclear Science and Technology Organisation Act 1987*, Part 11, section 5.

3 ANSTO, News Release, ‘Nuclear Reactor Replaced’, 3 September 1997, <http://www.ppk.com.au/mediareleases.html> (7 September 2000).

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required level of education, experience and skills to hold a competitive position in particular areas of Australian industry.

There are others, however, who question the need for Australia to have a nuclear research reactor. They suggest that there are alternative sources of neutron beams for research, that researchers could use overseas facilities and that the funding dedicated to a new reactor could be better utilised in other areas of research and without the environmental concerns and continuing problems associated with nuclear waste.

*Alternatives to a reactor as a neutron beam source and as a producer of radioisotopes*

In 1993, the McKinnon Review could draw no conclusion on whether a reactor would be the best choice for a neutron source. Since then, developments in accelerator technology have continued and today there are people who continue to urge Australia to invest in a spallation source.<sup>4</sup> They suggest that acceptable alternatives, such as a spallation source, would perform the same function as a nuclear research reactor but would not present the health and safety and environmental problems associated with reactors.

The Committee notes the rapid development of accelerator technology over recent years but understands that neither cyclotrons nor spallation sources provide, at the moment, a satisfactory alternative to a new reactor. The Committee observes, however, that the possible options to a new research reactor were not thoroughly investigated by an independent panel prior to the decision to build the new reactor.

*Priorities in funding scientific research*

The McKinnon Review also maintained that it was essential to ask whether Australia had the scientists and the intensity of effort in neutron beam research to make the purchase of a new reactor a good scientific investment and whether our industry would be able to exploit its potential if Australia were to buy a new one.<sup>5</sup> This question is as relevant today as it was then in 1993.

Based on the evidence presented to it, the Committee notes that some Australian scientists and engineers present a strong case for the new reactor. They argue that Australia has both the young talent and experienced researchers able and keen to benefit from using the reactor.

While the Committee is of the view that nuclear science and technology is not backward looking and does offer opportunities for researchers to keep at the forefront of important areas in scientific research and development it does not automatically follow that the best way to promote scientific and medical research in this country is

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4 See for example, Dr J.W.Boldeman, "Accelerator driven nuclear energy systems", in 'Energy for Ever: Technological Challenges of Sustainable Growth', Academy symposium, November 1997, <http://www.atse.org.au/publications/symposia/proc-1997p.11.htm> (5 January 2001) Dr Jim Green, submission to the Senate Economics References Committee, submission no. 1, p. 2.

5 K.R. McKinnon et al., *Future Reaction: Report of the Research Reactor Review*, August 1993, p. 28.

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by spending substantial amounts of public funds for the next forty years on a single research reactor.

Indeed, during the course of the inquiry, a number of witnesses expressed their concern about the Government's strategy in funding a new research reactor and the influence it would have on scientific research in Australia. This issue is central to the question about priorities in funding and whether the planned research reactor should be high on this list of priorities.

**In this regard, the Committee notes that the decision to build a new research reactor was taken without a comprehensive review of scientific research funding in Australia that may have given the Government and the Australian people a better understanding of where investment would be most productive. It is disappointed that the decision about the new reactor was made without broad consultation with the scientific community. In its opinion, an open public debate would have been a means of both informing the community about science in Australia and allowing interested people to participate actively in examining whether Australia does need a new reactor. It would also have provided a better opportunity for experts in the field to study more closely the alternatives to a nuclear reactor and would have given scientists and engineers a chance to discuss research priorities.**

### **Medical radioisotopes**

In announcing the Government's intention to replace HIFAR, the Minister for Science and Technology stated that the new reactor at Lucas Heights would 'build on Australia's life-saving medicine capabilities'. It is intended to maintain and improve health benefits provided to the Australian community by keeping the country virtually self-sufficient in nuclear medicines and also by promoting the development of new therapeutic and diagnostic substances.<sup>6</sup>

With few exceptions, medical practitioners making submissions to this inquiry highlight their concern about maintaining a reliable supply of reactor produced medical radioisotopes for both diagnostic and therapeutic purposes. They maintain that they rely on Lucas Heights to meet their need for an assured and readily available source of these products.

#### *Alternative methods for diagnosis*

Some witnesses question the very need for reactor-based radioisotopes. They argue that there are other modalities that could replace nuclear medicine in diagnosis.

While noting that the demand for alternative methods for imaging including CT, MRI and PET is on the rise, the Committee is not convinced that these modalities can

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6 ANSTO, 'Replacement Research Reactor for ANSTO', 3 September 1997, <http://www.ppk.community.au/mediareleases.html> (18 August 2000).

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satisfactorily substitute for those relying on reactor produced medical isotopes. According to nuclear medicine practitioners, rather than compete with one another, the different modalities are complementary diagnostic tools for various medical conditions. Based on the evidence before it, the Committee understands that in the future the application of medical radioisotopes for both diagnostic and therapeutic purposes will likely broaden as research continues into their use.

#### *Alternatives to reactor-produced medical radioisotopes*

A solid core of participants to this inquiry argue strongly that there are means of producing medical radioisotopes other than in a reactor. They hold firmly to their position that given adequate funding and resources, researchers could develop a cyclotron capable of producing radioisotopes that would replace the need for reactor produced ones, particularly the workhorse radioisotope, technetium-99m.

The Committee recognises that technetium-99m will remain the most important radioisotope for diagnostic nuclear medicine imaging for the foreseeable future.<sup>7</sup> It understands that the demand for technetium-99m labelled radiopharmaceuticals is increasing because the number of tests performed is rising and new products being developed use the same radioactive isotope.

The Committee points to the state of current research which shows that while it may be technically possible to produce this radioisotope in a cyclotron, it is not commercially viable and that the possibilities of producing technetium-99m in a cyclotron has not progressed beyond the experimental stage. In summary, the Committee accepts that, at the moment, nuclear reactors will continue to be the only feasible source of neutrons for the manufacture of technetium-99m and that it is unlikely that anything will compete with the reactor produced molybdenum-technetium generator in the near future.

#### *Importation of radioisotopes*

The nuclear medicine practitioners who made submissions to this inquiry argue that the use of reactor based radiopharmaceuticals in Australia continues to grow and that the new reactor will provide the extra capacity to meet this demand. They do not believe that the demand could be met satisfactorily from imports which, they maintain, are subject to disruption and delay.

**The Committee appreciates the standpoint of nuclear medicine practitioners in underlining the importance for Australia to be self-sufficient in the supply of radioisotopes. The Committee is not convinced, however, that logistical difficulties constitute a serious obstacle to the successful importation of radioisotopes. It listened to the argument that there now exists an efficient and reliable global supply and distribution network that could supply Australia with most of its medical radioisotopes, including technetium-99m in the form of**

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7 Dr Christopher Rowe, submission no. 132.

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molybdenum generators. For instance claims about potential transportation delays are equally applicable to the distribution of radioisotopes within Australia. Currently the only supply of technetium-99m comes from Lucas Heights and the generators have to be transported extensive distances from Sydney to other parts of Australia as well as exported to other countries in the region. The Committee does not accept that relying on imports would exacerbate these problems. Indeed, international links into airports in states other than Sydney (eg Perth, Brisbane) might provide a quicker supply.

#### *Medical research and development in Australia*

The Committee acknowledges the importance of Australia remaining involved in medical research and development. It appreciates the view that the proposed new research reactor would provide valuable research opportunities for medical scientists.

**The Committee again, however, expresses its disappointment that a full public inquiry was not held before the decision to build the new reactor was taken. Such an inquiry would have allowed medical practitioners and researchers to build up a comprehensive picture of Australia's future health needs and the most beneficial areas of research. With this information, Government would have been better placed to make an informed judgement on setting priorities in funding research into Australian medical science including the role and importance of nuclear medicine.**

#### **National interest**

At the moment, Australia's foreign policy recognises that Australia as a medium-sized power must concentrate its involvement in international matters where its interests are closely engaged. It has identified nuclear non-proliferation, especially in the Asia Pacific region, as a very important concern.<sup>8</sup>

The Department of Foreign Affairs and Trade (DFAT) argues that Australia has had an influential voice in the non-proliferation regime and in strengthening international safeguards because of its strong expertise in nuclear science technology and its reputation for advancing practicable, achievable concepts in this area.<sup>9</sup> It believes that the maintenance of nuclear expertise, underpinned by the operation of a multi-purpose nuclear research reactor, is important to Australia's national interest and that this expertise in nuclear science and technology cannot be substituted by other means.<sup>10</sup>

Few would challenge the proposition that it is in Australia's national interest to be a well-informed and active participant in nuclear non-proliferation and safeguards measures. Indeed, those who believe that there is no justification for the replacement

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8 Commonwealth of Australia, *In the National Interest: Australia's Foreign and Trade Policy*, White Paper, 1997, p. 50.

9 *Committee Hansard*, 27 October 2000, p. 309.

10 Mr Bill Paterson, DFAT, *Committee Hansard*, 27 October 2000, p. 307.

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research reactor on national interest grounds generally recognise Australia's positive contribution to promote nuclear weapons non-proliferation. They, however, take issue with the assertion that Australia needs a modern research reactor to have an effective role in nuclear disarmament matters. Most notably, they reject the suggestion that activities such as negotiating agreements, setting standards and strengthening safeguards is conducted at a level of detail that requires nuclear science expertise developed at home.<sup>11</sup>

The Committee recognises that Australia is providing useful support for international agencies in their efforts to make the world safe from nuclear weapons proliferation. It also acknowledges that expertise in nuclear science and technology helps in making informed decisions about certain aspects of nuclear non-proliferation and nuclear safeguards systems. Moreover, the Committee recognises that Australia cannot ignore developments in the use of nuclear energy in the region. It accepts that it is in Australia's national interest to join with its neighbours to ensure that the region is kept safe from the proliferation of nuclear weapons and from nuclear mishap.

The Committee, however, finds it difficult to measure and quantify any substantial contribution that the research reactor has in Australia's overall efforts toward nuclear disarmament. Rather, this appears to be an instance where suitcase science offers a satisfactory alternative to a local research facility. The Committee suggests that if the need arose for DFAT officers to have an understanding of a particular nuclear issue, it could either recruit personnel or engage specialist consultants from overseas, or second their officers to relevant overseas institutions to obtain the required knowledge.

**Further, the Committee is not convinced that Australia needs a new research reactor to make a positive contribution to nuclear disarmament. It notes the view that there are significant advances to be made in nuclear non-proliferation using political and diplomatic skills particularly in encouraging the nuclear weapons states to reduce their nuclear weapons and for countries to agree to be more open for nuclear weapons inspections. Australia has played a more prominent role in recent years in promoting disarmament and nuclear non-proliferation despite the fact that we have only an outdated small research reactor by world standards and we do not possess nuclear power plants, re-processing plants or nuclear weapons.**

**The Committee finds that the justification for the new research reactor solely on national interest grounds is not strong where national interest is defined on purely 'security' and non-proliferation grounds.**

**In this regard the Committee finds that the connection made between constructing a new research reactor and the ability to influence nuclear disarmament and the implementation of nuclear safeguards is tenuous.**

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11 Submission no. 6, Senate Economics References Committee, p. 7.

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**Assertions are made that there is a strong link, but DFAT did not produce solid proof of its existence.**

The argument for the new research reactor on national interest grounds carries greater weight when the reactor is placed in a broader context which encompasses all areas of nuclear technology, particularly its role in the region as an educational, research and training centre. The Committee believes, however, that this reason alone is not sufficient to justify the new research reactor. If the reactor is to go ahead, then its place as a research tool providing a neutron source for Australian researchers and products for industry, the health care system and the environment should be the main consideration.

**Conclusion—Part I**

In addressing the overall question of whether Australia needs a new research reactor, the Committee finds that on the one side members of the scientific and medical community who gave evidence presented a strong case for the proposed research reactor. On the other hand, those who oppose the new reactor drove home the issue about the lack of serious consideration given to alternatives to the reactor and whether funds for the new reactor would be better invested in other areas of scientific research.

The Committee believes that the decision to build a new reactor was taken without a detailed investigation of Australia's present needs and its future direction. The Government did not undertake strategic planning to determine where and how Australia's scientific research and development resources would be most effectively directed prior to entering into the contract for a new reactor. If Australia is to take a strategic and focused approach to research and development in Australia, it must take full account of the options available.

The Australian Science and Technology Council undertook a review of major national research facilities in 1992 and recommended that HIFAR be replaced with a high flux research reactor. It advised, however, that a further process of rigorous evaluation would be necessary before deciding to proceed with the facility. It also suggested that a review of the future development of major national research facilities should be undertaken at four-yearly intervals.

Likewise, the McKinnon Review, in 1993, found that it was not appropriate for a second stage of development to follow immediately on its report. Importantly, it concluded:

The Review should now be wound up and if, at some later stage, a new reactor is envisaged, it should be assessed by a new panel possibly operating within the *Environmental Protection (Impact of Proposals) Act 1974*.<sup>12</sup>

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12 See Chapter 2, paras 2.40–2.42.



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A broad review to determine Australia's needs and priorities for science and technology and to identify the infrastructure necessary to enhance Australia's scientific and industrial competitiveness would now be timely.

It is the view of the Committee that before a new reactor is ever constructed in Australia, a case must be established for the need for one. This should be done through an independent inquiry which allows for full public consultation and debate.

**Recommendation—Chapter 11, p. 224**

**The Committee notes that the Government has failed to establish a conclusive or compelling case for the new reactor, and recommends that before the Government proceeds any further it undertake an independent public review into the need for a new nuclear reactor.**

**Recommendation—Summary, Part I, page 92 and Chapter 11, p. 225**

**The Committee recommends that before the Government proceeds any further with the proposed reactor, it undertake a thorough and comprehensive public review of funding for medical and scientific research in Australia with a view to assessing priorities including the role, if any, a research reactor would have in contributing to Australia's scientific, medical and industrial interests.**

## **PART II—THE TENDERING PROCESS AND THE CONTRACT**

### **The tendering process**

At the outset, the Committee makes clear that ANSTO, despite a number of requests, has withheld from the Committee documents central to the effective scrutiny of the tendering process, notably the Request for Tender and the Principal's Project Requirements.

Overall, those closely involved in the tendering process, particularly the three auditors addressing separately probity, process and risk, have spoken positively about it and in particular have remarked on the planning and forethought that went into the tendering process. The two unsuccessful tenderers acknowledged that the early phases of the tender process were satisfactory but they were critical of the evaluation process. Other witnesses in favour of the new reactor also expressed surprise at the eventual outcome which resulted in INVAP being successful.

The Committee has strong reservations about the tendering process especially the evaluation stage. In part the Committee's uncertainty stems from the limited information made available to it. At times, the Committee was given assurances by ANSTO about aspects of the tendering process but did not have access to the necessary information or documentation to make an informed assessment. Questions about matters such as the site visits, the tenderers' specifications, and the importance

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given in the evaluation of tenderers to proven experience and to modelling remain unanswered.

## **Contract**

According to ANSTO, the contract is to be a design and construct arrangement on a fit-for-purpose basis.<sup>13</sup> The project covered by the contract includes all works necessary for the provision of a functioning pool type research reactor and facility, including the buildings, the necessary plant and equipment and the provision of interfaces to integrate with existing site infrastructure, which is to remain operational to enable effective use of the facilities.<sup>14</sup> The project will be undertaken on a lump-sum turnkey basis, which means that the reactor will be built and handed over ready for use.

In looking at the contract, the Committee again finds itself constrained in conducting a thorough inquiry because it has not been granted access to relevant documents, including the contract itself, and has had to rely on ANSTO to select material it deemed appropriate for the Committee's purposes. On this limited and selected information, it would appear to the Committee that the nature of the contractual commitments at least stipulate the responsibilities of each party to the agreement and the action to be taken should either party fail to meet its legal obligations.

However, the Committee is concerned that critical aspects of the contract have not been made public particularly what commitments may have been entered into that would be binding on a new Government.

## **Recommendation—Chapter 11, page 226**

**The Committee strongly recommends that there should be full disclosure of the termination provisions of the contract signed with INVAP so the Parliament and the Australian people will know what obligations have been entered into.**

### *Accountability*

The Committee is highly critical of ANSTO's approach to providing documents. Its attitude seems to stem from a culture of secrecy so embedded that it has lost sight of its responsibility to be accountable to the Parliament.

**The Committee does not believe that making documents, such as the Request for Tender, the Principal's Project Requirements and the Contract, public would result in an unreasonable disclosure of information with commercial value. Indeed, the Committee remains unconvinced that a disclosure of such material would prejudice ANSTO's commercial interests, since ANSTO is the sole**

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13 ANSTO, Replacement Research Reactor Project, *Report of the Tender Selection Review Committee*, 13 May 2000. Reprinted at Attachment F, ANSTO, submission no. 118.

14 Professor Helen Garnett, Public Works *Committee Hansard*, 5 May 1999, p. 136.

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**operator of a research reactor in Australia. The Committee found ANSTO's explanation for withholding this information to be thin. The onus of proof was on ANSTO to establish that the release of this material would harm its commercial interests—it has failed to do so.**

**The refusal by the Minister to comply with the Senate's order to produce certain documents relating to the tender process and the contract has not been satisfactorily justified to the Committee. It believes that the Minister should be censured by the Senate for his failure to comply with the Senate's order.**

ANSTO's predisposition to secrecy is also reflected in its overall approach to disseminating information about its operations. Some witnesses described the information made available as 'scant'. One witness remarked:

ANSTO is not so much economical with the truth as positively miserly with it. Its scrooge-like approach to giving information is truly amazing.<sup>15</sup>

The Committee notes that during the tendering process, ANSTO did not make full use of the opportunity to consult with the wider scientific community, to engage in open dialogue with those interested in the proposed project or to build bridges with some of the local community.

## **Conclusion—Part II**

The Committee cannot give its unqualified approval of the tendering process or the contract. It certainly would like to have had full and unfettered access to documents it believed was necessary for it to fulfil its responsibility to scrutinise the tendering process and the contract. In light of the Committee's dissatisfaction with ANSTO's refusal to provide certain documents, it believes that an independent review, based on unimpeded access to the tendering documents and the contract, should be undertaken of the tendering process and the contract.

### **Request to Auditor General for consideration—Chapter 11, pages 226**

**The Committee requests that the Australian National Audit Office consider examining the tender and contract documents for the new reactor at Lucas Heights with a view to determining:**

- **whether further investigation of the tendering process and the contract is warranted;**
- **whether, during the tendering process, ANSTO ensured that there was adequate and appropriate independent verification and validation of the tenderers claims;**

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15 Ms Jean McSorley, *Committee Hansard*, 25 October 2000, p. 33.

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- **whether the cost estimate of \$286.4 million for the replacement research reactor project is based on sound reasons and whether it is still accurate;**
  - **whether any contract provisions have been inappropriately claimed to be confidential and if so, on what grounds; and**
  - **whether the documents sought by the Committee and the Senate should now be made public.**

**The Committee further believes that the Minister should be censured for his refusal to comply with an order of the Senate to table various documents relating to the tendering process and the contract.<sup>16</sup>**

### **If the project goes ahead**

Whilst the Committee's primary recommendation is that the project should not proceed as currently planned, it recognises that the current Government and ANSTO are going ahead with the construction of the proposed reactor.

There are contractual arrangements in place that have set down a time framework and price schedule for the project. As noted in chapter 7, payment will be paid progressively and only for satisfactory performance measured against specifically defined parameters. It is one thing, however, to have each milestone ticked off as construction progresses but as noted by people such as Professor White from the Academy of Science, the integration of these various elements will be the real performance test. The Committee takes note of these concerns.

If the project goes forward, as is currently planned, then the Committee makes a number of recommendations to ensure that it is properly and effectively managed and that the concerns of Sutherland Shire Council and other relevant groups are properly considered.

### **Recommendation—Chapter 11, page 227**

**To provide assurance that the research reactor's design is under appropriate management and that the technical specifications and objectives are being met, the Committee recommends that ANSTO engage an independent expert third party to review and evaluate, periodically throughout the life of the project, the contractor's performance as measured against the specified requirements. It further recommends that such reports be made public.**

### **Recommendation—Chapter 11, pages 227**

**The Committee also recommends that the Minister for Industry, Science and Resources report immediately to Parliament and thereafter on a three monthly basis, the progress made on the design, construction and eventual operation of the new reactor at Lucas Heights. This report is to include:**

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16 See Appendix VI, Order for Production of Documents.

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- a full explanation of the work completed against the agreed time schedule and all payments made;
  - an account of any delays or anticipated disruptions to the project and an explanation for such hold-ups;
  - a statement on the strategies in place to monitor and ensure that the contractor is meeting performance specifications including the findings of independent consultants engaged to assess the contractor's performance measured against required specifications; and
  - the proposed work and payment schedule for the following six months.

The Committee is particularly concerned about ANSTO's accountability to Parliament. It is concerned about the broad undertakings about confidentiality ANSTO gave to the tenderers and its subsequent refusal to provide tender and contract documents to the Committee.

**Recommendation—Chapter 11, page 228**

**The Committee recommends that ANSTO take immediate action to ensure that before it enters into any formal or legally binding undertaking, agreement or contract that all parties to that arrangement are made fully aware of ANSTO's obligation to be accountable to Parliament.**

**Recommendation—Chapter 11, page 228**

**The Committee further recommends that any future contract entered into by ANSTO, include provisions that require contractors to keep and provide sufficient information to allow for proper Parliamentary scrutiny of the contract and its management.**

## **PART III—SAFETY, PUBLIC HEALTH AND WASTE MANAGEMENT**

The Committee considers that there is currently no real evidence to suggest that public health and safety would be at risk as a result of the routine operation of such a reactor. However, there may well be significant risks to the surrounding community in the event of accidents or unsafe operation. The community and their representatives are entitled to be concerned, and to be adequately informed, about such possibilities and their potential consequences.

The Committee notes that the Government's decision to build the new reactor at Lucas Heights was taken without any proper investigation of alternative sites as recommended by the McKinnon Review and the Senate Economics References Committee report. Clearly, the Government has made its premature decision based on

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short term cost considerations and ANSTO's current interests rather than the long term needs of the nation and the Sutherland Shire community.

The Committee also finds that the provisions for public consultation in the *Australian Radiation Protection and Nuclear Safety Act* leave many questions unanswered. Although the present CEO of ARPANSA, Dr John Loy, has indicated that he intends to follow a comprehensive process of public consultation during the licensing of the reactor, the Committee is uneasy that this is left to the judgement of the CEO rather than being legislatively guaranteed. The Committee would like to see the requirement for public consultation strengthened and made explicit in legislation and the process clearly defined.

#### **Recommendation—Chapter 11, pages 228–29**

**The Committee recommends that, if the new research reactor project is to go ahead, the Government put in place a number of mechanisms to ensure that full and thorough public scrutiny of the proposal takes place during the licensing process. This is to ensure, to the greatest extent practicable, that the construction and operation of the proposed reactor would not adversely affect the health of the community or damage the environment. At a minimum, these mechanisms must include:**

- **publication of all submissions made to ARPANSA during the licensing process;**
- **publication of ARPANSA's responses to concerns raised in these submissions, detailing in what way those concerns have affected the CEO's decision;**
- **release of the full details of the design and the construction contract except for those items which are determined as truly commercial-in-confidence.**

The Committee is of the opinion that the licence applications for the new reactor should be subject to a similar process of judicial public hearings as occurs in the United States. This will ensure world's best practice and allow for greater public involvement.

#### **Recommendation—Chapter 11, page 229**

**Given that there are doubts about privilege and the powers of such an inquiry to obtain documents because the *ARPANS Act* is silent on these issues, the Committee recommends that the Government appoint a panel including the CEO of ARPANSA under other legislative powers to conduct the inquiry.**

#### **Recommendation—Chapter 11, page 229**

**The Committee further recommends that, in the longer term, the Government undertake a public review of the kinds of public consultation process required in other jurisdictions and in relation to other proposals with public health and**

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**environmental implications. The object of such a review should be to determine best practice and to amend the *ARPANS Act* accordingly.**

The Committee considers that assurances concerning the timely establishment of a storage facility for waste arising from the reprocessing of Australia's spent fuel rods must be critically examined. The Committee once again notes the pre-conditions proposed by the McKinnon Review namely that a solution to the problem of waste 'was essential and necessary well prior to any future decision about a new reactor'.<sup>17</sup> It is highly critical of the Government for ignoring this important recommendation of the McKinnon Review.

Given that it has not seen ANSTO's contract with COGEMA and in view of the ongoing litigation in France, the Committee does not accept that there are adequate guaranteed arrangements in place at this stage for the future reprocessing of spent fuel from the new reactor.

The Committee is also very concerned about the growing opposition overseas to the transportation and reprocessing of radioactive waste, especially toward countries, such as Australia, which rely on others to reprocess or condition their waste material for ultimate storage.

**Recommendation—Chapter 11, page 230**

**The Committee recommends that the contract, and any subsequent agreements, with COGEMA for the re-processing of Australian spent fuel rods be made public.**

**Recommendation—Chapter 11, page 230**

**The Committee recommends that, in light of the growing opposition overseas, ANSTO prepare and fully cost a contingency management plan for spent fuel conditioning and disposal within Australia. This plan should fully describe the technologies to be used should Australia have to manage its spent fuel wholly within Australia.**

**Recommendation—Chapter 11, page 230**

**The Committee recommends that the Government satisfactorily resolve the question of the safe disposal of new reactor spent fuel before approval to construct a new reactor is given.**

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17 K.R. McKinnon et al., *Future Reaction: Report of the Research Reactor Review*, August 1993, p.xxii.

