

Uranium

One of the main planks of the Australian government's policy covering uranium exports is the imposition of strict safeguards to reduce the chance that other countries will use the uranium to help build nuclear weapons. Opponents of uranium mining have argued that existing safeguards against proliferation of nuclear weapons are totally inadequate — in the words of the Ranger Inquiry, "existing safeguards may provide only an illusion of protection"⁽¹⁾ — and that the only sure way to stop proliferation is to restrict the spread of the nuclear power industry. But neither side has seriously addressed the problem of proliferation at home: the possibility that Australia might obtain nuclear weapons.

Two particular developments in Australia could lay a much stronger basis for Australian acquisition of nuclear weapons: nuclear power plants and uranium enrichment.

Sir Charles Court in 1978 announced a desire for a nuclear powered electricity generating unit in Western Australia. This intention has been reaffirmed since then, and the Western Australian State Energy Commission has undertaken preliminary site assessments.⁽²⁾ Nuclear power also has been under consideration in other states from time to time, particularly in Victoria.⁽³⁾

It is possible to construct a nuclear weapon directly using plutonium produced in a power reactor, as the US Energy Research and Development Administration has demonstrated, though the yield may be low and unpredictable. Plutonium suitable for the manufacture of reasonably efficient nuclear weapons can be produced without much difficulty in a nuclear power plant by removing the fuel rods from the reactor after only a short time, thereby reducing contamination by the more unstable plutonium isotopes.

Uranium enrichment is another part of the nuclear fuel cycle being considered for Australia. The Uranium Enrichment Group of Australia (UEGA) — consisting of BHP, CSR, Peko-Wallsend and Western Mining Corporation — in 1981 prepared a preliminary feasibility study for the establishment of a uranium enrichment industry in Australia. It is now undertaking a full feasibility study. EUGA probably will be joined in the enrichment project by interests from either the US, France, Japan or Urenco-Centec (a combination of British, Dutch and German interests). The proposed plant would be designed to enrich uranium only to the low level required for nuclear power reactors. But a plant based on the centrifuge method, the most likely possibility for Australia, could be adapted without too much difficulty to enrich uranium to the high level suitable for nuclear weapons.

Before looking further at the present situation, it is worthwhile reviewing the Australian debate of a decade ago over nuclear power and nuclear weapons. It was in 1969 and 1970 that the influence of those groups favouring nuclear weapons for Australia — the 'bomb lobby' — reached its height. Desmond Ball has identified four main groups in the bomb lobby:⁽⁴⁾ certain right-wing Liberal and Country Party politicians; certain people in the nuclear research community, particularly in the Australian Atomic Energy Commission (AAEC); the RSL; and a few individuals associated with the armed forces. The major issues at the time were the Treaty for the Non-Proliferation of Nuclear Weapons (NPT) and the possibility of a nuclear power station for Australia.

The NPT was anathema to the bomb lobby because it would have strongly inhibited open opportunities for obtaining nuclear weapons. The Liberal-Country Party government for two years refused to declare its position. It is noteworthy that the Prime Minister.

John Gorton, had spoken out in favour of nuclear weapons years earlier when he was a Senator.⁽⁵⁾ Finally in 1970 the government announced it would sign the NPT, but would not ratify the treaty until satisfaction was obtained concerning various reservations. It is ironic today that the primary reason offered then for opposing the signing of the NPT was that the treaty was not considered adequate to prevent proliferation. This stance can be illustrated by the revealing statements made by two nuclear scientists

HEADING FOR THE BOMB AGAIN

who were prominent in the NPT debate, Sir Ernest Titterton, Professor of Nuclear Physics at the Australian National University, and Sir Philip Baxter, formerly Chairman of the AAEC, whose views are analysed in some detail in my study *Nuclear Knights*.⁽⁶⁾

The government's grudging decision to sign the NPT in 1970 was a defeat for the bomb lobby. One reason for signing the treaty was to prevent Australian access to information on nuclear developments from the US and the UK being cut off.⁽⁷⁾ The treaty was not ratified until after the Labor party formed a government in 1972.



Besides the NPT, the other major issue that concerned the bomb lobby and which came to a head in the late 1960s was that of a nuclear power station for Australia. The bomb lobby and the associated 'nuclear power lobby' favoured speedy construction of a power reactor on the ground that Australia then would be able, if desired, to produce nuclear weapons using plutonium from the reactor.⁽⁸⁾ In June 1969 Prime Minister Gorton announced that Australia's first nuclear power station would be built at Jervis Bay.

The close connection between nuclear power and nuclear weapons was well recognised by those in the bomb lobby. For example, federal parliamentarian E. H. St John in 1968 advocated building a nuclear power station and using it to produce plutonium which would be stockpiled for possible nuclear weapons.⁽⁹⁾ The link was also quite clear to Sir Ernest and to Sir Philip.⁽¹⁰⁾

As it turned out, plans for the Jervis Bay reactor were deferred after William McMahon became Prime Minister in 1971. This was a second and very serious defeat for the bomb lobby.⁽¹¹⁾ The reasons for the decision to defer the reactor were primarily the high economic cost of the plant and the change in key decision-makers involved.^(12,13) The reactor was eventually cancelled by the Labor government.

The issues raised in the debate of a decade ago are still relevant today. The physical facilities of a nuclear power plant or a uranium enrichment plant could be used to provide the raw material — plutonium or enriched uranium — which is the essential basis for constructing nuclear weapons. In addition, the acquisition and training of personnel to design, operate and regulate such facilities would also provide the skilled labour necessary to move to the construction of nuclear weapons.

There are severe limitations in the effectiveness of current safeguards against use of 'civilian' nuclear facilities to make nuclear weapons. This has been recognised by the Ranger Inquiry in Australia, the Flowers Commission in the UK, the US Office of Technology Assessment, the Stockholm International Peace Research Institute, and the International Nuclear Fuel Cycle Evaluation Committee. Indeed, the potential of the nuclear industry for laying a base for acquisition of nuclear weapons was summarised well in 1969 quote from Sir Philip:

"The growth of this industry and the expertise and the facilities which it will create will provide a basis from which an Australian government, at any future date feeling that nuclear weapons were essential to provide this nation's security, could move with the minimum delay to provide such means of defence."⁽¹⁴⁾

Some people would argue that this possibility is remote in Australia because there is no significant political constituency pushing for Australian nuclear weapons. It is true that some members of the bomb lobby have been quiet in recent years, following their defeats over the NPT and the Jervis Bay reactor. But the pressures to acquire Australian nuclear weapons could rapidly increase in the future following changes in the political climate, perhaps following an international crisis of some sort. In such a case, the very existence of nuclear power stations or uranium enrichment plants could play a key political role in decisions about nuclear weapons.

From the military point of view, the acquisition of nuclear weapons by Australia is generally seen as unnecessary or undesirable. J.O. Langtry and Desmond Ball state categorically that "The option of developing nuclear weapons as the absolute deterrent has virtually no support within the Australian

defence establishment"⁽¹⁵⁾ The RSL continues to advocate consideration for Australia obtaining nuclear weapons, but this currently has little impact on policy-making.

In spite of the silence and weakness of the bomb lobby, a quick resurgence of its influence is possible. In late 1981 it was reported that the Indonesian government may have begun a programme to develop nuclear weapons, one reason for this apparently being their belief that Australia may have its own programme.⁽¹⁶⁾ If Indonesian nuclear weapons were to become a serious possibility, the pressures for an Australian bomb could become intense. One may also imagine the cries for nuclear weapons in the political aftermath of a nuclear war in the Middle East, or of a 'surgical' nuclear strike on US military bases in Australia.

Undoubtedly there would be individuals in the government, the AAEC and the defence establishment who would exploit such situations for ideological reasons or for their own career purposes. Popular support for Australian nuclear weapons might not be hard to create and channel. An opinion poll reported in March 1981 that over one third of Australians favoured having nuclear bombs,⁽¹⁷⁾ similar to the level of support for this option a decade earlier.⁽¹⁸⁾

In a crisis situation in which pressures mounted for nuclear weapons, the military value or political rationality of obtaining them might remain quite low. But a decision could well be motivated for primarily emotional or domestic political reasons. The existence of facilities — nuclear power or uranium enrichment plants — which clearly showed that nuclear weapons could readily be obtained might well play a key role in swaying the debate.

The reasons for not having nuclear weapons are many, and include their low cost-effectiveness compared to other weapons for Australian defence, their contribution to a regional arms race, and the immorality of using weapons of mass destruction. Furthermore, there are many other good reasons for not having nuclear power plants or uranium enrichment plants, including economics and environmental effects. But good reasons may not be the basis for decision-making, especially in times of crisis. Nuclear power or uranium enrichment in Australia could lay the basis for an Australian bomb, whatever the good intentions of present planners. Therefore this possibility should be taken into account in a full public debate before these parts of the nuclear fuel cycle are introduced to Australia. Proliferation is not something that can happen only somewhere else.

Brian Martin
Dept. of Mathematics

Acknowledgements

Desmond Ball, John Carlin, Mark Diesendorf, Ann Moyal, Hugh Saddler, Rosemary Walters and Ian Watson provided valuable comments in the development of this article.

Notes:

1. Ranger Uranium Environmental Inquiry, *First Report* (Canberra: Australian Government Publishing Service, 1976), p.147.
2. E.A. Barker, "W.A. picks possible N-site", *West Australian*, 16 June 1979, p. 1; anon, "Premier backs nuclear plant", *West Australian*, 29 January 1980. See also Tony Martin, "Govt to duck nuclear vote", *Western Mail*, 28-29 March 1981, pp. 1-2, who suggests that the WA government may postpone the plant for electoral reasons.
3. See Philip Sutton, *Victorian nuclear countdown: state government plans for a nuclear Victoria* (Melbourne: Environment Action Centre, 1980). Currently nuclear power is seen as uneconomic in Victoria.
4. Desmond J. Ball, "Australia and nuclear non-proliferation", *Current affairs bulletin*, 55, April 1979, pp. 16-30
5. Anon, "On the nuclear threshold", *Current affairs bulletin*, 45, 15 December 1969, pp. 19-31.
6. Brian Martin, *Nuclear knights* (Canberra: Rupert Public Interest Movement, 1980).
7. Allan Barnes, "Scientists had a change of heart", *Age* (Melbourne), 23 February 1970, p. 7.
8. S. Encel and Allan McKnight, "Bombs, power stations, and proliferation", *Australian quarterly*, 42, March 1970, pp.15-26.
9. *ibid*
10. Martin, op. cit. note 6.
11. Allan Barnes, "The bomb lobby defused — at least for a year", *Age*, 12 June 1971, p. 13.
12. Ball, op. cit. note 4.
13. Ann Mozley Moyal, "The Australian Atomic Energy Commission: a case study in Australian science and government", *Search*, 6, September 1975, pp. 365-384.
14. Anon, "We'll spend \$5000m. on nuclear power 'by year 2000'", *Australian*, 14 July 1969, p. 3.
15. J.O. Langtry and Desmond Ball, "Australia's strategic situation and its implications for Australian industry", *Pacific defence reporter*, 8, February 1981, pp.36-42.
16. Brian Toohey, "The bomb for Indonesia: Canberra probe", *National Times*, 15-21 November 1981, pp. 1, 6.
17. *Bulletin*, 101, 17 March 1981, pp. 42-43.
18. Anon, op. cit. note 5.