From: Darwin NO-WAR Committee

ATTENTION: Australian Parliament House Standing Committee on Industry and Resources
REGARDING: Inquiry into Australia's non-fossil fuel energy resources.

The Darwin NO-WAR Committee recognizes the value of an inquiry into Australia's non-fossil fuel resources. We recognize that global climate change due to carbon emissions is one of the greatest environmental threats placing the planet, and we applaud any effort to develop non-polluting and sustainable alternatives.

While we acknowledge that the nuclear industry has been quick to promote itself as 'the carbon free alternative', we recognize that nuclear energy is neither non-polluting (every stage of the nuclear cycle results in radioactive emissions) nor sustainable (reserves are finite, and their consumption adversely impacts upon future generations). However it is the inextricable link between nuclear power and nuclear weapons which the Darwin NO-WAR Committee believes disqualifies the consideration of nuclear power as an option, not just for Australia, but the globe.

The links between nuclear power and military applications has been a reality of the nuclear industry since its inception. The very first nuclear reactors constructed in the 1950s were built to produce plutonium for the US, former Soviet Union and British bombs. It was only later that reactors were adapted to generate electricity. Similarly, Australia's initial involvement in the international uranium trade was for military purposes. Although our government imposes conditions intended to ensure that exported uranium is for peaceful purposes, the first uranium exported from Australia was provided upon the very opposite condition – that it be used only for military purposes, and not for power. The Jervis Bay reactor project, defeated in the 60s, was later revealed by the then-coalition PM John Gorton to have been intended not only to produce electricity but also plutonium for nuclear weapons.

Clearly, expansion of nuclear power, either domestically or abroad, would necessarily involve extensive deployment of nuclear technology, including radioactive waste dump sites and fuel cycle facilities. But as nuclear technology spreads around the globe, so does the risk of nuclear proliferation. Such 'peaceful' nuclear facilities around the world have been mis-used for weapons research and production. About 25 countries (including Israel, India, Paksitan, South Africa and North Korea) of the 60 which have built nuclear reactors are known to have used these facilities for covert weapons research.

Furthermore, 'peaceful' nuclear reactors have produced enough fissile material to build over 100,000 weapons. A typical reactor produces enough plutonium to produce about 30 nuclear weapons[1]. Australian uranium alone has resulted in sufficient plutonium to produce about 6000 nuclear weapons[2]. Some countries such as France and the UK separate the plutonium made in their nuclear reactors to be available as the raw material

[1] A 1000MWe reactor produces about 300 kilograms of plutonium each year
[2] based on estimates of 60 tonnes of plutonium

for nuclear bombs. Recent setbacks in the international policy arena, led by the USA's renewed enthusiasm for tactical nuclear warheads and depleted uranium ammunition, have brought the dangers and challenges of nuclear arms back onto center stage.

Plutonium, contained in spent nuclear fuel, is an unavoidable product of nuclear power production. Plutonium also happens to be one of the most radioactive, toxic and dangerous substances known. Just a single microgram, smaller than a speck of dust, can cause fatal cancer if inhaled or ingested. However it is the weapons potential that makes this material so dangerous. A sphere of plutonium the size of a tennis ball can be used to make a conventional nuclear warhead capable of killing many thousands of people.

The Darwin NO-WAR Committee firmly recommends that we cannot plan for a global energy supply based on a process that produces such a hazardous substance as plutonium.

The nuclear industry also has implications for the global threat of terrorist activities. Aside from conventional weaponry, plutonium could also be made into a crude but very effective terrorist weapon that would be transportable in a small vehicle. Once obtained, even low-level nuclear waste, or depleted uranium, could be easily used by a small terrorist group to create a so-called 'dirty bomb' that distributes potentially deadly radioactive dust. International reports of a terrorist threat during the Sydney Olympics aimed at Australia's research reactor stand as a further reminder of the heightened terrorist potential presented by the nuclear industry.

Perhaps the most alarming trend in military implications of the nuclear industry is the use of depleted uranium (DU). Radioactive waste is produced at an annual rate of about 10,000 tonnes in nuclear power reactors worldwide. Some nations have found an inventive, if not intelligent, way around the global failure to find an acceptable solution to the long-lived problem posed by growing stockpiles of radioactive waste. DU material has been used to case ammunition ranging from bullets to bombs, and has also been incorporated into the design of military hardware such as personnel carriers.

DU consists of approximately 99% uranium-238 which, while it has a relatively low level of radioactivity, is very dangerous if inhaled or ingested. It is not only radioactive but toxic, with a proven negative effect on DNA, nerve tissues and kidneys. In areas where DU weapons have been used (for example Basra in Iraq) large increases in cancers and birth defects are being observed. Troops stationed in areas where DU weapons have been used, or those who were in DU armored tanks when they were hit, have been diagnosed with a range of symptoms consistent with radiation poisoning[3].

A United Nations resolution classified DU weapons to be illegal weapons of mass destruction[4]. International laws of war restrict the actions nations at war can take, to minimize the effects of conflict on civilian populations and the natural environment. The effects of DU weapons reach beyond their immediate and legal target, continue after the

[3] "Dutch MPs and SFIR troops not informed about use of depleted uranium in south Iraq" by Maarten H.J. van den Berg, RISQ, 4 August 2003 (at http://electronicIraq.net/news/1006.shtml)

[4] http://www.theherald.co.uk/news/1773-print.shtml

war and have an unduly negative impact on the environment. They also constitute an unduly inhumane risk for both civilians and combatants.

Of course, we are assured that domestic legislation and international agreements ensure that uranium sold for nuclear power cannot be diverted to military applications. It is claimed that international safeguards stand to ensure that 'peaceful' nuclear materials and facilities are not misused for military purposes. Recent world events demonstrated that the International Atomic Energy Agency, or at least the USA's President George Bush, believed that Iraq had developed a nuclear capability, despite national and global safeguards, UN verification systems and international agreements among the 'club' of 'responsible nuclear powers'. These authorities have recently stated the need to better control the spread of enrichment and reprocessing technology.

The present status of both national and international mechanisms for controlling the misuse of 'peaceful' nuclear technologies, materials and facilities are weaker now than they have been in the past. Current restrictions on export of uranium are not as tight as they were in the 70s, in part due to the pressure generated by commercial negotiations proceeding ahead of bilateral treaties. Recent years have seen the USA drive the weakening of international laws and agreements, not least of all their total dismissal of the anti-ballistic missile treaty. The USA have refused to ratify the comprehensive test ban treaty, and have stunned observers as they have ploughed ahead with the development and testing of new miniaturized nuclear weapons. Despite hopes raised by the apparent end of the USA's cold-war arms race with the former Soviet Union, America still has plans for a new plutonium processing facility to re-arm the aging nuclear weapons that the people of the world had hoped would be decommissioned.

The rise of 'irresponsible' (ie : late-developing) nuclear states, who acquired nuclear weapons capabilities through domestic nuclear power programs, and the clear lack of confidence in our global capacity to control the spread of nuclear weapons technologies, even to the hands of terrorists, demonstrate the failure of the doctrine of international 'safeguards'. In reality, these international mechanisms have been used to facilitate, rather than limit, the spread of nuclear technologies, facilities and materials across political boundaries.

The only way forward we see for the effective control of the spread of nuclear weapons is through reinvigoration of international disarmament and non-proliferation mechanisms. The Darwin NO-WAR committee insists that further investment in the nuclear industry, be it within Australia or internationally, is counteractive to the imperative for disarmament and responsible management of the growing international stockpile of nuclear waste.

We recommend that the House Committee rejects nuclear fuel as an option for meeting Australia's energy requirements, and rejects any proposal to export nuclear material from Australia. We heartily encourage the House Committee to focus their attention upon truly sustainable and non-polluting alternatives to fossil fuels.

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