



PUBLIC HEALTH ASSOCIATION
of Australia Inc
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Chairman
House of Representatives
Standing Committee on
Industry and Resources
Parliament House
CANBERRA ACT 2600

Submission No: 53

Dear Chairman

Inquiry into the Development of the non-Fossil Fuel Energy Industry

The Public Health Association of Australia (PHAA) is a forum for the promotion of the health of the public as well as serving as a professional resource for public health personnel. The Association provides opportunities for the exchange of ideas, knowledge and information on public health and actively undertakes advocacy for public health policy, development, research and training. As the PHAA has a national and multi-disciplinary perspective on public health issues, it is able to make a major contribution to the public health debate in Australia. The PHAA is a non-party political organisation.

The PHAA notes that the Standing Committee on Industry and Resources is commencing this inquiry with a case study into the strategic importance of Australia's uranium resources with particular regard to the following issues:

- a) global demand for Australia's uranium resources and associated supply issues;
- b) strategic importance of Australia's uranium resources and any relevant industry developments;
- c) potential implications for global greenhouse gas emission reductions from the further development and export of Australia's uranium resources; and
- d) current structure and regulatory environment of the uranium mining sector (noting the work that has been undertaken by other inquiries and reviews on these issues).

Global demand for Australia's uranium resources and associated supply issues

This is not an area in which the PHAA has particular expertise. However, the PHAA contends that the issue of supply of uranium to other nations cannot be addressed without examining the concomitant issue of what happens to depleted uranium, nuclear waste (that is its storage, its return to country of origin, and reprocessing) and the links between the nuclear power industry and nuclear weapons proliferation.

At this stage, Australia has not resolved the issue of storage of spent uranium, and the international community has yet to resolve whether spent uranium is the problem of the country using the resource or the country of origin. There is no safe method of long term storage of radioactive waste, including mining tailings, spent fuel rods or plutonium. Some components of waste remain radioactive for hundreds of thousands of years.

Consequently, the PHAA would like to see wide ranging debate on these issues as part of the Committee's Inquiry.

Strategic importance of Australia's uranium resources and any relevant industry developments

In spite of attempted safeguards, it is not possible to guarantee that Australian uranium will not be used in weapons production. Nuclear weapons technology and materials continue to proliferate around the world. Countries suspected of trying to develop or acquire nuclear weapons may soon be added to the 11 known to possess such weapons, exponentially increasing the likelihood of their use. While conventions to ban other major types of weapons of mass destruction – biological and chemical – have been concluded, no treaty or convention exists which specifically bans the use of nuclear weapons, the weapon of mass destruction with the greatest potential for harm.

In addition, grave concerns have arisen about the health and environmental effects of Depleted Uranium (DU), which is known to possess both radioactivity and chemical toxicity. These concerns have arisen partly because of health problems suffered by the civilian population of Iraq. UN cancer statistics for southern Iraq indicate a seven-fold increase in cancer during the period 1989-1994. The incidence of congenital malformations in Iraq has risen sharply since the 1991 Gulf War. In addition, many US Gulf War veterans are disabled by a range of symptoms, called Gulf War Syndrome, for which there is no generally accepted explanation. PHAA acknowledges that the Australian Defence Forces no longer use munitions that contain DU.

The PHAA notes the recent disappointing outcome of the Nuclear Non-Proliferation Treaty review meeting and urges the Australian Government to make the creation of an effective international instrument to bring about full nuclear weapons disarmament its highest foreign policy priority.

The PHAA urges the Australian Government to seek an immediate international moratorium on the use of DU munitions and an independent study on health and environmental effects of DU, including studies of both the civilian and the military populations that have been exposed.

The PHAA urges the Australian Government to ensure that no DU munitions are used on Australian soil (eg in joint military exercises) and that no Australian troops join any military coalition in which DU munitions might be used.

Potential implications for global greenhouse gas emission reductions from the further development and export of Australia's uranium resources
Why nuclear power is not the solution to global warming fact summary¹

The PHAA understands that nuclear power is being proposed as one of the alternatives for limiting greenhouse gas emissions from coal generated electricity production during this century. However, there are significant reasons why nuclear power does not give humanity a real solution. They include:

- Nuclear power can only produce electricity and heat. While electricity is about 41% (in 1996) of world energy use, one third of (and growing) green house emissions is from transport. Nuclear power does not address this sector's contribution to greenhouse.
- Nuclear power is a costly option. Nuclear power has only been viable where there is substantial government support. Nuclear power is not cost effective, in comparison to gas (a cleaner option) and even coal without government subsidies. Renewable energy systems are becoming cost comparative and will become cheaper. Energy use reduction is an even the most cost effective and immediate strategy.
- There are large opportunity costs for expanding the nuclear power industry at this stage by diverting much needed resources (financial and research) away from energy reduction and from renewable energy system development and deployment. Every dollar invested in energy efficiency displaces seven times as much CO₂ emissions as the same dollar invested in nuclear power.
- The nuclear industry has a poor history with its safety record. The whole nuclear fuel process is not safe; there are direct health and environmental consequences from radioactive leak and contamination from all stages of the nuclear energy process form mining to storage of waste, and massive release from reactors during accidents. Since 9/11 threats of terrorist attacks on nuclear facilities are not a negligible risk.
- Nuclear waste is not yet a solved problem and the industry is struggling to cope with the waste it has without adding to it by expanding the industry.
- Nuclear weapons proliferation is a significant risk. The serious and poorly controlled link between nuclear power and nuclear weapons makes a massive expansion of nuclear power a significant risk for weapons proliferation at a time when international tension is likely to increase.
- Nuclear power is not really greenhouse gas free. While the actual production of electricity from reactors is greenhouse gas free, uranium mining, processing and transport, and reactor building and decommissioning phases of the nuclear fuel process are producers of greenhouse gas emissions.
- Centralised (as opposed to distributed) power sources carry hidden costs and waste. Centralised power facilities lose 10 to 15% of energy in distribution and distribution infrastructure itself costs. Nuclear is a very centralised system.

The most effective and immediate solution is to reduce demand for power and increase use of currently available efficient technologies. Gains are achievable with no technological development. This can be done by increase efficiency in generation and distribution, in use of energy efficient appliances and smaller cars, and by reducing waste of power from unnecessary use. Power corporations can change policy to encourage conservation not overuse.

The PHAA recommends that the Australian Government divert funding that would have gone to support nuclear power development in Australia to efforts to help energy use reduction and developing solar, wind and other environmentally friendly power prospects.

Current structure and regulatory environment of the uranium mining sector

Australia's existing uranium mines have had repeated minor accidents involving leakage of radioactive waste into the surrounding environment. The public health effects of radioactive (radon gas and air-borne radioactive particulates) and non-radioactive (eg molybdenum) contamination release from uranium mines has not been well studied yet. Aboriginal land owners, environmental groups and other community groups have called for better access to radiation monitoring data and results from uranium mines.

The PHAA has continuing concerns in the area of occupational health effects of uranium mining, including dose-related increase of risk of lung cancer (with no safe lower threshold of exposure), as this effect is synergistic with the effects of tobacco smoking. Non radiation related occupational health effects are similarly of concern. These are the same as for other mining in general and include injury, lung diseases and hearing loss.

The PHAA recommends that the Australian Government does not allow any new uranium mines in Australia and moves the closure of existing mines.

The PHAA recommends that the Australian Government ensure that the general public, Aboriginal land owners, environmental groups and other community groups are given better access to radiation monitoring data and results from uranium mines.

The PHAA urges the National Health and Medical Research Council and the Australian Government to implement the International Commission on Radiological Protection (ICRP) guidelines on worker safeguards.

The PHAA urges the Australian Government to establish a national register of all uranium industry workers who have been exposed to radiation to enable appropriate medical care and study of the occupational health effects of uranium mining and milling.

I would be happy to discuss the issues raised above with the Committee if you think that would be useful. I can be contacted on (02) 62852373 or at plaut@phaa.net.au

Yours sincerely,

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