



Medical Association for
Prevention of War, Australia, Inc.



**Medical Association for Prevention of War
& the Public Health Association of Australia**

**Joint submission to the Nuclear Fuel Cycle Royal Commission
South Australia**

Executive Summary

KEY ISSUES

Toxicity

The nuclear industry worldwide has a long and well documented record of errors and accidents leading to toxicity to humans and the environment¹. Workers and others exposed to ionising radiation have increased rates of cancer and other diseases. The medical evidence about the health impacts of radiation shows even low doses of radiation increase risk of malignancy and cardiovascular disease, and as more evidence emerges the toxicities are found to be greater than previously estimated.

Weapons Proliferation

There is a clear link between possession of nuclear power and nuclear weapons proliferation. One only has to look at current concerns about Iran acquiring a nuclear program to see that it is a significant and realistic threat. The majority of nuclear weapons states have acquired their weapons whilst claiming they are using nuclear power for peaceful purposes.

Any enrichment, reprocessing, reactor construction or accumulation of high level waste by Australia will have regional impacts. This may lead to perceptions of proliferation risk by our neighbouring countries, which over time may develop into a nuclear arms race. Clearly this is a highly undesirable outcome.

Waste

After billions of dollars and more than six decades spent on research, there is still no long term solution for the wastes from nuclear reactors. Decades of industry promises of commercial reactors that will use waste as fuel have failed. International research reactors using waste have been very expensive

¹ Let the facts speak www.letthefactsspeak.org 2012

disappointments. Mining, bomb testing and reactor sites have a long history of very poor rehabilitation and leaving areas that are uninhabitable.

Current medical use of isotopes does not justify a waste repository. Medical isotopes can be produced without needing a reactor, and the vast majority have such a short half-life they can be disposed of in normal waste streams after a short period of storage.

Electricity Demand

Australia has excess baseload generating capacity and will have so for a several decades, our grid electricity consumption has been declining over the last seven years due to a combination of efficiencies and renewables, and we are shutting down coal fired plants as a result. There is no economic or market argument for increasing our baseload electricity generation capacity.

Cost

Nuclear power is expensive when compared to other current power sources, despite industry claims to the contrary. Insurance, very long term waste management and decommissioning costs are seldom factored in. Reactors internationally have required major subsidies, contracts with prices more than double current power costs, and massive loan guarantees. Reactors are getting steadily more expensive to build and almost uniformly have major delays in construction. Fuel manufacture and reprocessing markets are reported as oversupplied and not commercially attractive.

Opportunity Cost

A focus on the nuclear industry will damage South Australia's potential to be a world leader in technology for renewable energy sources. It is also likely to cause major damage, by distracting from the urgent need for action on climate change. Any reactor would take roughly two decades to begin to produce power, and even longer to repay the carbon emissions from construction. This is too slow.

With research and international partnerships, South Australia has the potential become world leader in cyclotron/accelerator (non-reactor) production of medical isotopes.

Expenditures and subsidies required by nuclear industries would reduce funds available to South Australians for health, education and other services and critical infrastructure.

Other energy sources create more employment, use less water and have much less potential for major intergenerational toxicities and nuclear catastrophes.

Declaration of Interests

It is critical that there is transparency regarding pecuniary interests of the staff (particularly expert advisers) of the Royal Commission. All interests (including past and current grants to academic departments and institutions) relating to the uranium mining and nuclear sector need to be declared, to ensure confidence in the process.

Governance and regulation

The South Australian government has a poor history when it comes to governance and regulation of this industry, with the legislation such as the Roxby Downs (Indenture Ratification) (Amendment of Indenture) Amendment Bill 2011 a clear illustration of commercial pressures overriding public health and community interests.

