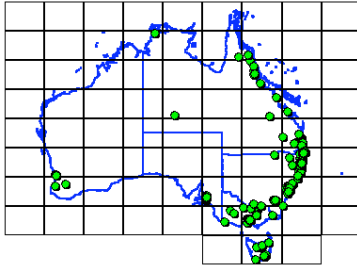


NATIONAL TOXICS NETWORK



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**Submission to the Uranium Mining,
Processing and Nuclear Energy Review**

INTRODUCTION

National Toxics Network Inc. (NTN) is a NGO (non-government organisation) network working to promote environmental health, environmental justice, pollution reduction, and a toxic free future locally, regionally and globally. NTN provides a regional voice on national and international toxic and environmental health issues, with a particular focus on vulnerable communities and children's environmental health. NTN is the Australian focal point for the International POPs Elimination Network (IPEN) and hosts the international IPEN Working Group on Community Monitoring and Body Burden. NTN has represented Australian and regional NGOs at the OECD Chemical Joint Meetings, the Intergovernmental Forum on Chemical Safety (IFCS) and at a range of UN Chemical Convention meetings. NTN is the Australian focal point for the IFCS INFOCAP information and capacity building program.

NTN regards the threats to the human and environmental health from any, let alone deeper Australian involvement in the nuclear fuel cycle as profound and the potential health impact from the use of nuclear weapons as intolerable. We also recognise that the threats posed by anthropogenic global warming are more severe than any previously posed by human activity. For a variety of reasons, from well-intentioned (though we believe not well informed) through to the pursuit of vested interests, nuclear power is, not for the first time, being advanced as a magic bullet supposed solution to an energy problem. At best, we regard nuclear energy as cul de sac on the journey to ameliorating climate change; at worst it has the capacity to severely exacerbate the problem.

We offer the following comments on the Review's terms of reference and discussion paper.

TERMS OF REFERENCE

The terms of reference for the Review are disappointingly narrow and fail to place the issue of nuclear power in general, and elements of the nuclear fuel in particular, within a broader energy policy framework which, most importantly, explores the broadest possible range of strategies to achieve very substantial real reductions in greenhouse gas emissions over the next few decades. Any potential role for nuclear power could be more fully and realistically assessed in the context of terms of reference similar to the following:

Economic issues

- (a) The capacity for Australia to contribute to meeting global energy end-use needs and the requirement for greenhouse gas emissions reductions through supply of:
 - a. fuels, including processed fuels;
 - b. energy technologies, including renewable and energy-efficiency technologies; and
 - c. energy-related services and intellectual property
- (b) The potential for expanding the above in a manner that will produce sustainable economic benefit for Australia
- (c) Examine least-cost and environmentally-sustainable pathways for providing energy services in Australia
- (d) The current state of energy service research and development in Australia and the capacity for Australia to make a significantly greater contribution to international energy service research and development

To the extent that the nuclear fuel cycle may be a component of the above, the cost-benefits of its potential contribution needs to be assessed. This assessment should include consideration of whether a substantial focus

on, and investment in the nuclear fuel cycle (including research and development) may have the potential for negatively impacting cheaper, cleaner, more-readily implemented and more-profitable means of providing energy services and reducing greenhouse gas emissions.

Environment issues

- (a) What are the most effective mechanisms for provision of energy services (including energy efficiency) for making an effective contribution to reducing global greenhouse gas emissions?
- (b) What are the life cycle environmental impacts of various mechanisms for provision of energy services (including energy efficiency)?
- (c) The extent to which a range of energy sources and services (including energy efficiency) could contribute to the mix of emerging energy technologies in Australia

Health, safety and proliferation Issues

- (a) The ability for centralised electricity generation to meet the energy service needs of much of the world's population
- (b) The security/vulnerability implications of centralised electricity generation (and nuclear electricity in particular). This should include considering the potential threat to civil liberties from measures intended to protect the security of energy infrastructure and supply.
- (c) The role of nuclear energy in contributing to weapons proliferation
- (d) What are the most effective means of meeting energy service needs while minimising adverse health and safety impacts?

ISSUES PAPER

The inquiry issues paper is “intended to highlight the types of questions that the taskforce will consider and to stimulate thinking about such questions”.

In fact, the issues paper is nothing more a series of 108 dot-pointed questions. The focus of the inquiry may be judged from the fact that 84 of these questions deal with economic issues, 15 with health, safety and proliferation issues and a mere 9 deal with environmental issues. It is hard to conclude other than that the last two sets of issues are being treated as matters of very subordinate concern.

With respect to the issues raised, we make the following observations:

Global Demand for Uranium

Any analysis of global demand for uranium (and particularly heroic efforts to estimate demand 50-100 years out) needs to be located within the explicit context of estimates of demand for energy services and the associated goals of quantified reductions in greenhouse gas emissions. At present the Australian Government projects significant growth in global energy demand to 2030, states a need for at least a 60 per cent reduction in global greenhouse gas emissions by 2050 but provides no linkage between these distant estimates.

It should be noted that environmental analysts have been producing detailed scenario projections for meeting energy service needs while reducing the environmental impact of energy supply for over thirty years, with Lovins' *Soft Energy Paths* (1975) being one of the earliest and best known examples. The related question of any potential role for nuclear power in Australia should take into account recent work performed for the

Australian Conservation Foundation¹ and WWF Australia² examining energy scenarios for achieving deep cuts in Australia's greenhouse gas emissions without any need for recourse to nuclear power generation. So far as we are aware there are no credible analyses showing scenarios for making deep cuts in Australia's greenhouse gas emissions which place reliance on nuclear power.

A range of scenarios needs to be presented and the assumptions underlying them need to be clearly articulated.

Alternatives to uranium

The issues raised under this heading are very narrowly focused and, in fact only consider other nuclear fuels. Any real analysis of this issue needs to consider all mechanisms for meeting energy service needs, including the role of energy efficiency and energy demand management.

Uranium conversion, enrichment, fabrication and reprocessing

What are the potential *security* implications for Australia of an expanded role in the nuclear fuel cycle. What are the potential associated implications for civil liberties?

Competitiveness of nuclear power

We support the Inquiry examining the issue of externalities and the privileged position given to fossil fuels in Australia through a failure to recognise pollution costs.

In performing the analysis, the Inquiry will also need to examine the often huge subsidies provided to nuclear power, including those related to piggy-backing on military programs, eg through access to enrichment capacity. In the early 1970s, nuclear enthusiasts commonly projected that over 1000 nuclear reactors would be operating in the US by 2000³. In the classic Energy Future Report of the Harvard Business School in 1977, Richard Stobaugh and Daniel Yergin pointed out that the subsidies granted to the nuclear industry in the US to that time would require massive injections of assistance to energy efficiency and renewable energy technologies to create a level playing field. Given that, it is ironic that usually minor mechanisms to partially reduce the slope of the playing field through redressing the historical subsidising of the nuclear (and, indeed, the fossil fuel) industry are often referred to "subsidising uncompetitive technologies".

The clear reality is that since the late 1970s in the US in particular, but in developed countries more generally nuclear power has failed the market test. It is a difficult task but the Inquiry must come to grips with the real cost of nuclear power. Perhaps our greatest concern is that huge investments will be made into nuclear technology that will dry up funding for more cost-effective, less-subsidised methods for reducing greenhouse gas emissions thereby exacerbating the impact of anthropogenic global warming.

There has been a fair amount of nuclear mythologising of late, which has placed the curtailment of building of nuclear plants in developed countries down to the partial meltdown of Three Mile Island in 1979 and the meltdown at Chernobyl in 1986. Unlike the death of Mark Twain, these supposed recordings of the economic death of the nuclear industry were anachronistic. When Friends of the Earth brought Amory Lovins to Australia to give evidence to the Ranger Uranium Environmental Inquiry in late 1975 he argued persuasively that the nuclear industry in the US was already experiencing rapid and fatal economic meltdown. The meltdown in

¹ The Allen Consulting Group (2006), *Deep Cuts in Greenhouse Gas Emissions – Economic, Social and Environmental Impacts for Australia*, March

² AGL, Frontier Economics and WWF Australia (2006), *Options for moving towards a lower emissions future*, May

³ Being wrong by a factor of 10 on projections less than 30 years into the future provides some indication of the difficulties facing the Review in attempting to project out 50-100 years.

Europe came some time later but there governments, rather than private firms, tended to be the owners of nuclear power stations and they were not quite as sensitive to market signals.

What are the economic risks of cost blowouts, delays and potential failure to commission electricity-generating plants based upon novel and unproven (eg Generation X nuclear plants)? This needs to be considered in the light of the history of such occurrences with respect to light water reactors, particularly in the US of which the ill-fated WPPSS episode is perhaps the classic example.

Australian electricity demand

A range of scenarios needs to be examined here, with electricity supply projections being framed within the context of energy service needs. What are the potential impacts of a focus on the nuclear fuel cycle for the development of energy efficiency and renewable energy (including the development of intellectual property) and the potential loss of international trade opportunities in these areas? Other non-market factors which could impact demand for nuclear energy include civil liberties concerns and widespread opposition to engagement in the nuclear fuel cycle within the Australian community as a whole and from a majority of state/territory governments.

Greenhouse implications of nuclear power

Examination of this question needs to consider the possibility of investment in the nuclear fuel cycle diverting funding from more cost-effective and quicker-to-implement mechanisms for reducing greenhouse gas emissions. We believe, based upon over 30 years of examining this economic lemon of an industry that significant investment in nuclear energy will have the perverse outcome of increasing greenhouse gas emissions.

Other environmental implications of involvement in the nuclear fuel cycle

The questions posed here by the Review compare nuclear power with other means of generating electricity – the analysis need to be broadened to compare all means of meeting energy service needs.

Health, safety and proliferation issues

It is 29 years, 9 months and 27 days⁴ since the Ranger Uranium Environmental Inquiry found:

“The nuclear power industry is unintentionally contributing to an increased risk of nuclear war. This is the most serious hazard associated with the industry.”

Perhaps today the Ranger Commissioners might make a similar observation about nuclear terrorism. If, heaven forbid, terrorists were to explode a nuclear device, what would be the implications for the nuclear industry? Would it be stopped dead in its tracks, or would we press on claiming we had no alternative and wait for the next terrorist nuclear explosion? In such circumstances, if we had put expensive, slow-to-deliver nuclear power at the centre of our national greenhouse response while simultaneously refusing to sign on to the modest first step targets in reigning in greenhouse gas emissions and valuing greenhouse gas pollution as zero cost how would articulate the efficacy of our action?

⁴ Yes we remember, we are not newcomers to this debate.