



Law Council
OF AUSTRALIA

Legal Practice Section

Inquiry into the prerequisites for nuclear energy in Australia

House Standing Committee on the Environment and Energy

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About the Law Council of Australia

The Law Council of Australia exists to represent the legal profession at the national level, to speak on behalf of its Constituent Bodies on national issues, and to promote the administration of justice, access to justice and general improvement of the law.

The Law Council advises governments, courts and federal agencies on ways in which the law and the justice system can be improved for the benefit of the community. The Law Council also represents the Australian legal profession overseas, and maintains close relationships with legal professional bodies throughout the world.

The Law Council was established in 1933, and represents 16 Australian State and Territory law societies and bar associations and the Law Firms Australia, which are known collectively as the Council's Constituent Bodies. The Law Council's Constituent Bodies are:

- Australian Capital Territory Bar Association
- Australian Capital Territory Law Society
- Bar Association of Queensland Inc
- Law Institute of Victoria
- Law Society of New South Wales
- Law Society of South Australia
- Law Society of Tasmania
- Law Society Northern Territory
- Law Society of Western Australia
- New South Wales Bar Association
- Northern Territory Bar Association
- Queensland Law Society
- South Australian Bar Association
- Tasmanian Bar
- Law Firms Australia
- The Victorian Bar Inc
- Western Australian Bar Association

Through this representation, the Law Council effectively acts on behalf of more than 60,000 lawyers across Australia.

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About the Section

The Legal Practice Section of the Law Council of Australia was established in March 1980, initially as the 'Legal Practice Management Section', with a focus principally on legal practice management issues. In September 1986 the Section's name was changed to the 'General Practice Section', and its focus broadened to include areas of specialist practices including Superannuation, Property Law, and Consumer Law.

On 7 December 2002 the Section's name was again changed, to 'Legal Practice Section', to reflect the Section's focus on a broad range of areas of specialist legal practices, as well as practice management.

The Section's objectives are to:

- Contribute to the development of the legal profession;
- Maintain high standards in the legal profession;
- Offer assistance in the development of legal and management expertise in its members through training, conferences, publications, meetings, and other activities.
- Provide policy advice to the Law Council, and prepare submissions on behalf of the Law Council, in the areas relating to its specialist committees.

Members of the Section Executive are:

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- Mr Dennis Bluth
- Mr Mark Cerche
- Ms Peggy Cheong
- Mr Philip Jackson SC
- Dr Leonie Kelleher OAM
- Ms Christine Smyth

Acknowledgement

This submission was prepared by the Australian Environment and Planning Law Group of the Legal Practice Section.

Introduction

1. The Law Council of Australia welcomes the opportunity to make this submission to the House of Representatives Standing Committee on the Environment and Energy's Inquiry into the prerequisites for nuclear energy generation (including small modular reactor technologies) in Australia (**the Inquiry**).
2. This submission has been prepared by the Australian Environment and Planning Law Group (**AEPLG**) of the Law Council's Legal Practice Section. The AEPLG's primary objectives are: to be a national focus group for environmental and planning law; to represent members of the profession working in the areas of environmental and planning law; to advise the Law Council on issues of environmental and planning law; and to advocate for the implementation of 'best practice' in environmental and planning law by the Federal and State governments.
3. The AEPLG notes that there have been two comprehensive examinations of the possibilities, opportunities, risks and challenges from the nuclear cycle in Australia:
 - *Uranium Mining, Processing and Nuclear Energy — Opportunities for Australia?* – A report to the Prime Minister by the Uranium Mining, Processing and Nuclear Energy Review Taskforce in 2006 (**2006 Taskforce Report**); and
 - *Nuclear Fuel Cycle Royal Commission Report* – A report prepared by Rear Admiral the Honourable Kevin Scarce AC CSC RAN (Rtd) for the South Australian Government in May 2016 (**2016 Royal Commission Report**).
4. The 2006 Taskforce Report noted, amongst other things, skill shortages, government policies, legal and regulatory prohibitions and complexities, high commercial and technology barriers and restrictions on uranium transport as significant barriers to Australia's investment in nuclear energy.¹ It also critiqued the immense cost and extremely slow turnaround from construction to production of nuclear energy, of at least 15 years, as major impediments to advancing this method of power generation.² Some of these issues were examined again in the 2016 Royal Commission Report (albeit with a focus on South Australia). However, since these two reports have been handed down, the AEPLG is not aware that any of these critical issues have been substantially progressed or resolved and thus the same obstacles remain today.
5. The AEPLG believes that the first prerequisite for nuclear energy generation in this country is a thorough review and consideration of the relevant conclusions drawn and recommendations made in the 2006 Taskforce Report and the 2016 Royal Commission Report.
6. The AEPLG believes that the second prerequisite is an acknowledgement of the principles of sustainable development. The Law Council has recently adopted the following formulation of nine key principles that comprise sustainable development:
 - (a) Natural resources should be exploited in a manner which is sustainable or prudent or rational or wise or appropriate.
 - (b) There should be effective integration of economic, environmental and social considerations in the decision-making process.

¹ Uranium Mining, Processing and Nuclear Energy Review Taskforce, *Uranium Mining, Processing and Nuclear Energy — Opportunities for Australia?* (Report to the Prime Minister, Commonwealth of Australia, 2006), 3 ('2006 Taskforce Report').

² *Ibid.*, 2.

- (c) If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
 - (d) The present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.
 - (e) People within the present generation have equal rights to benefit from the exploitation of resources and from the enjoyment of a clean and healthy environment.
 - (f) Conservation of biological diversity and ecological integrity should be a fundamental consideration in all resource management and planning decisions.
 - (g) Environmental costs should be internalised into decision-making for economic and other development plans, programs and projects likely to affect the environment.
 - (h) The global dimension of environmental impacts of policies and actions should be considered.
 - (i) Decision-making about development that affects the environment or involves the exploitation of natural resources should respect, protect and fulfil human rights.
7. The AEPLG believes that each of these principles is profoundly relevant to the potential development of nuclear energy generation capacity in Australia and should be embedded into any further deliberations by the Australian Government.
8. The AEPLG also makes the following brief comments and observations following the elements of the Terms of Reference.

Responses to the Terms of Reference

a. Waste Management, Transport and Storage

9. Previous reports identified Australia as having a number of geologically suitable areas for deep disposal of radioactive waste. The 2006 Taskforce Report noted that:

*Disposal of high-level waste including spent nuclear fuel remains an issue in most nuclear power countries. There is a consensus that disposal in appropriately engineered deep (500–1200 metres underground) repositories is the answer and such facilities are under development in many countries. Australia has areas suitable for such repositories.*³

10. While there are a number of countries are currently developing waste storage facilities,⁴ no long-term study exists as to the environmental and safety impacts of such facilities.

³ Ibid.

⁴ *Nuclear Fuel Cycle Royal Commission* (Final Report, May 2016), Chapter 5 and Appendix H.

11. The 2006 Taskforce Report identified restrictions on uranium transport as one of the main factors affecting uranium mining in Australia. It identified uranium transport restrictions arising from: negative public perceptions; regulations that exceed international standards; and consolidation in the international shipping industry that limits the scheduled routes and ports at which uranium carrying vessels can call. This reduces the choice of shipping firms and routes, increasing delays and costs.⁵ These factors, as well as higher levels of security in the current heightened security environment, contribute to the reluctance of some transport companies, local councils, and the federal and state governments, to be involved in or allow transport of uranium.
12. It noted that although the existing regulation of uranium mining, transportation, radioactive waste disposal and nuclear research facilities in Australia is generally of a high standard, significant overlaps in regulatory responsibility exist, identifying a critical need to streamline existing arrangements to improve regulatory efficiency and transparency.⁶

b. Health and Safety

13. Clear health benefits exist in cutting emissions in the electricity and transport sector and consequent reductions in air pollution. However, the health and safety dangers surrounding nuclear energy production and storage are well documented. A 2018 Report by the CSIRO noted that 'nuclear power is caught between having the existing deployment scale of a mature technology, but with the technological potential of an immature technology in terms of optimal technology design not being completely settled'.⁷
14. Countries that have historically welcomed the development of nuclear power are now moving away from this technology. Japan previously had 54 nuclear reactors. However, following the 2011 Fukushima disaster, only 9 reactors at 8 nuclear power plants are now operational. Following the disaster, all of Japan's nuclear reactors were suspended, with at least twenty ceasing operation on a permanent basis.⁸

c. Environmental Impacts

15. Climate change has a direct impact on the environment by contributing to extensive species extinction and ecosystem collapse and impacts on the global human population through increased food insecurity, the displacement of communities and more extreme weather events. The international community has committed to the reduction of carbon dioxide emissions through the Framework Convention on Climate Change and subsequent agreements, including the Paris Agreement. Australia must do its best to contribute to the global emissions reduction effort.
16. The 2006 Taskforce Report noted Australia's greenhouse challenge requires a full spectrum of initiatives and its goals cannot be met by nuclear power alone.⁹ In considering the mix, it is important to recall that nuclear energy is not renewable.

⁵ 2006 Taskforce Report, 29.

⁶ Ibid 9.

⁷ Paul W Graham et al, *GenCost 2018: Updated projections of electricity generation technology costs*, (CSIRO, December 2018) ('2018 CSIRO Report').

⁸ US Energy Information Administration, 'Japan has restarted five nuclear power reactors in 2018', *Today in Energy* (Web Page, 28 November 2018) <<https://www.eia.gov/todayinenergy/detail.php?id=37633>>.

⁹ 2006 Taskforce Report, 2

Uranium is a finite resource, like coal or gas.¹⁰ Conventional reserves of uranium worldwide are sufficient to meet current demand only for the next 50-100 years.¹¹ Once consideration is given to a 'construction-to-production' timeframe of more than a decade, and the vast associated costs, nuclear power cannot offer a long-term solution. As the cost of renewable energies fall and their popularity grows, by the time nuclear plant construction is completed, the technology may have become obsolete.

17. The consensus among scientific organisations, including those represented at the Intergovernmental Panel on Climate Change, is that the current impact of human-induced greenhouse gas emissions is of unprecedented proportions.¹² Time taken to build power stations – global average of 9.4 years – is too long. There is need for a more immediate solution. Wind and solar farms take, on average, 1-3 years to construct.¹³ The earliest that nuclear electricity could be delivered to the grid would be 10 years, with 15 years more probable.¹⁴ If Australia were to proceed with wind and solar, some predict that Australia could be on 100 per cent renewables by the early 2030s.¹⁵

d. Energy Affordability and Reliability

18. A switch to renewables is already providing reduced energy pricing in Victoria.¹⁶ The cost of both wind and solar energy has dropped, leaving the cost of nuclear power at many times greater than renewables.
19. At its most expensive, nuclear is double the cost of onshore wind energy.¹⁷ Currently, in the United States, the generation of wind energy is \$29-\$56 per megawatt hour,¹⁸ with solar at \$36.¹⁹ Nuclear is cited as far higher, at \$112-\$189 per megawatt hour.²⁰ This sentiment has been reflected in the 2018 CSIRO Report referred to above.

e. Economic Feasibility

20. Some communities and sectors may receive an economic boost as actions to reduce emissions provide short-term growth opportunities (for example, sectors involved in construction and maintenance). A low emissions future that avoids the worst impacts of climate change is also important for the prosperity of sectors such as tourism and agriculture

¹⁰ The Climate Council, 'Nuclear power stations are not appropriate for Australia – and probably never will be' (Web Page, 23 January 2019) <<https://www.climatecouncil.org.au/nuclear-power-stations-are-not-appropriate-for-australia-and-probably-never-will-be/>>.

¹¹ 2006 Taskforce Report, 21

¹² Intergovernmental Panel on Climate Change, *Climate Change 2014: Synthesis Report - Summary for Policymakers* (2014) <https://www.ipcc.ch/site/assets/uploads/2018/02/AR5_SYR_FINAL_SPM.pdf>.

¹³ The Climate Council, 'Nuclear power stations are not appropriate for Australia – and probably never will be' (Web Page, 23 January 2019) <<https://www.climatecouncil.org.au/nuclear-power-stations-are-not-appropriate-for-australia-and-probably-never-will-be/>>.

¹⁴ 2006 Taskforce Report, 2

¹⁵ See, eg, Interview with Mark Diesendorf and Richard Broinowski, 'Who is pushing for nuclear energy?', *Late Night Live* (ABC Radio National, 29 August 2019) <<https://www.abc.net.au/radionational/programs/latenightlive/who-is-pushing-for-nuclear-energy/11461788>>.

¹⁶ Independent Expert Panel on Interim Emissions Reduction Targets for Victoria, *Interim Emissions Reduction Targets for Victoria (2021-2030)*, (Final Report, March 2019) 10.

¹⁷ Graham Lloyd, 'The nuclear energy option', *Inquirer, The Australian* (online, 3 July 2019) <<https://www.theaustralian.com.au/inquirer/report-argues-for-the-nuclear-energy-option/news-story/f3faf4befb3d68cedc01c6735d467976>>.

¹⁸ Lazard, 'Levelized Cost of Energy and Levelized Cost of Storage 2018' (Web page, 8 November 2018) <<https://www.lazard.com/perspective/levelized-cost-of-energy-and-levelized-cost-of-storage-2018/>>.

¹⁹ *Ibid.*

²⁰ *Ibid.*

21. However, the 2006 Taskforce Report noted that nuclear power is likely to be between 20 and 50 per cent more costly to produce than power from a new coal-fired plant at then current fossil fuel prices in Australia,²¹ and so the economics of nuclear energy generation need to be thoroughly examined.
22. The AEPLG notes that the Hinkley nuclear energy generation facility in the United Kingdom is reported to have costs currently at 20.3 billion pounds and it is still not operational. The UK government had to enter into financial agreements with other states to proceed, and the project is currently not on target to complete by a 2025 deadline. Construction has now stopped and may not resume. This demonstrates the risk of cost overruns and wasted resources that, in the AEPLG's view, would be better invested in renewable power, with a quicker, more reliable turnaround.²²
23. The 2018 CSIRO Report noted that feedback from stakeholders suggested that large nuclear power plants of any kind will be more difficult to deploy because of falling minimum demand and the greater redundancy required to cover an unplanned outage of a large plant. As such, the idea of smaller modular reactors has been circulated. However, the true value of these remains to be seen. Such reactors may be appropriate for military operations but may be prohibitively expensive for commercial power production.

f. Community Engagement

24. Community response must be expected by those standing to gain by a new facility and those potentially to lose (such as communities in coal mining areas). Respectful and inclusive engagement with all communities, including Aboriginal communities and traditional owners is extremely important. Systems for collaboration need to be explored.²³

g. Workforce Capability

25. Due to Australia's lack of skilled workers in this sector, many personnel would, at least in the short-term, be likely recruited from overseas, with reduced economic impact in terms of local job-creation.

h. Security Implications

26. The need for a single national regulator for radiation safety, nuclear safety, security safeguards and related impacts on the environment would be desirable to cover all nuclear fuel cycle activities.²⁴
27. The proper safeguarding of any nuclear reactor facilities is of paramount importance, not only from industry accidents and environmental disasters, but from the general public, particularly those opposed to the development of such technologies. Reactors in multiple locations nationally would create a further large protection cost.

²¹ 2006 Taskforce Report, 2

²² Interview with Mark Diesendorf and Richard Broinowski, 'Who is pushing for nuclear energy?', *Late Night Live* (ABC Radio National, 29 August 2019) <<https://www.abc.net.au/radionational/programs/latenightlive/who-is-pushing-for-nuclear-energy/11461788>>.

²³ Chapter 6 of the 2016 Royal Commission Report has some particularly useful commentary on the need for social and community consent: *Nuclear Fuel Cycle Royal Commission* (Final Report, May 2016), Chapter 6.

²⁴ 2006 Taskforce Report, 9.

j. Other Relevant Matters

28. In the view of the AEPLG:

- (a) There is need for an immediate and stable set of policies for emissions reduction across the economy now and in the future, along with measures to improve resource efficiency, growing the circular economy and new negative emissions technology.
- (b) As identified in 2006 Taskforce Report, there is need for rationalisation of uranium mining regulation to ensure a consistent national approach to environmental and radiation protection, and the maintenance of high standards throughout the industry.²⁵
- (c) Enforcement of existing uranium mining conditions and rehabilitation is an essential prerequisite to any expansion of the nuclear sector in Australia beyond mining.

²⁵ Ibid 2.