



Submission to the Victoria Nuclear Prohibitions Inquiry

I make this submission as an Australian citizen and New South Wales qualified lawyer, as well as an internationally recognised legal adviser on all aspects of the civilian nuclear energy sector.

SUBMISSION

This submission focuses on the legal and regulatory prerequisites should Australia wish to develop nuclear energy generation. These legal and regulatory prerequisites are an essential foundation of any nuclear energy programme.

The nuclear sector is one of the most heavily regulated – internationally and nationally. Australia has some of the world’s most comprehensive and stringent nuclear safeguards, nuclear non-proliferation and nuclear security controls which are overseen by Australia’s Safeguards and Non-Proliferation Office (“ASNO”). Australia also has existing radiation protection and nuclear safety regulatory infrastructure overseen by the Australian Radiation Protection and Nuclear Safety Agency (“ARPANSA”). In many of these areas, Australia is viewed as a global leader.

Our existing domestic laws and regulations are, naturally, primarily focused on the activities of uranium mining and export, and the operation of the OPAL research reactor at Lucas Heights in Sydney.

The regimes of established nuclear countries will provide models and precedents for Australia to consider but, ultimately, Australia will need to develop and implement a legal and regulatory regime that is tailor-made to our particular policies, needs and circumstances.

Australia can call on both its existing human resources (many of whom have internationally recognised experience in nuclear law and regulation), as well as foreign advisors, to develop a future legal and regulatory infrastructure. This infrastructure cannot be developed overnight and efforts should be undertaken to ensure that Australia’s human resources are actively involved in the multiple international forums, and on a bilateral basis with key partner countries (such as the United States, Canada and the United Kingdom), to keep abreast of and be ready to develop a legal and regulatory infrastructure for nuclear energy, should a policy decision in this direction be taken in the future.

Should Australia wish to introduce nuclear energy, a comprehensive review of Australia’s existing legal and regulatory infrastructure would be needed to consider and make recommendations in the following primary areas:

- (a) **Policy objectives underpinning the development of nuclear energy generation in Australia.** Such policy objectives should include affirming Australia’s commitments to nuclear non-proliferation, nuclear security and nuclear safety in the context of a civilian nuclear energy programme. They should also address the role of the Federal

Government in facilitating the development of nuclear energy generation in Australia, whether within framework of low carbon energy incentives and/or nuclear energy-specific mechanisms. These policy objectives would inform the required legal and regulatory infrastructure.

- (b) **Primary legal impediments to nuclear energy generation in Australia.** The object of the *Uranium Mining and Nuclear Facilities (Prohibitions) Repeal Bill 2019* is to repeal the Uranium Mining and Nuclear Facilities (Prohibitions) Act 1986. Even if the Bill is enacted, impediments at the Federal level include the prohibitions contained in the Australian Radiation Protection and Nuclear Safety Act 1998 and the Environment Protection and Biodiversity Conservation Act 1999. Obviously, State and Federal prohibitions would need to be overturned.
- (c) **Possible Federal actions to strengthen international and bilateral nuclear commitments.** For example, Australia is not currently a contracting party to any international convention on third party liability for nuclear damage. Australia should consider participation in an international nuclear liability regime - most likely the 1997 Vienna Convention on Civil Liability for Nuclear Damage together with the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention and/or the Convention on Supplementary Compensation for Nuclear Damage. In addition, the Federal Government should consider whether its existing bilateral nuclear cooperation agreements are sufficient to facilitate export of civilian nuclear technology, equipment, services and materials to Australia from selected technology vendor countries.
- (d) **Domestic legal infrastructure for a civilian nuclear power programme.** Australia would need to review the comprehensiveness of the nuclear safeguards, nuclear security, nuclear safety and emergency preparedness provisions of existing laws and regulations in the context of the introduction of nuclear energy generation. Australia would need to ensure that it implements in domestic law its treaty obligations pertaining to civilian nuclear energy generation. A comprehensive nuclear liability regime should be adopted into Australia's domestic law. To implement the necessary legal infrastructure, Australia could consider amending its existing legislation or promulgating new, consolidated and comprehensive legislation governing the civilian nuclear energy sector.
- (e) **Domestic regulatory infrastructure for a civilian nuclear power programme.** Australia would want to ensure the adoption of best international regulatory practices governing nuclear energy, through benchmarking to international standards such as the safety standards of the International Atomic Energy Agency and the regulations of established nuclear countries. The licensing process and regulatory approach are important considerations. For example, Australia should review different international examples of design pre-licensing, single-step versus phased licensing and prescriptive versus non-prescriptive regulatory practices. Public participation and information disclosure in the regulation of nuclear energy generation should also be addressed to ensure Australia's regulatory and administrative regimes promote appropriate engagement with Australian stakeholders, including the public. If Australia pursues

the introduction of small modular reactors (“**SMRs**”), Australia should collaborate with and be informed by the current SMR licensing activities of key foreign regulators such as those in the United States, the United Kingdom and Canada, as well as expand its involvement in international forums discussing SMR licensing.

- (f) **The suitability of the respective powers and responsibilities of Australia’s current agencies.** ARPANSA and ASNO currently oversee and implement the majority of Australia’s legal and regulatory nuclear infrastructure. The authorities and resources of these agencies could be expanded in the event of the development of a civilian nuclear energy programme in Australia. A review of the jurisdictions of other Federal Government agencies would also need to be undertaken to ensure efficient and effective regulatory and administrative processes governing nuclear energy generation.

- (g) **A roadmap for the implementation of nuclear energy policy and development of the supporting legal and regulatory infrastructure governing nuclear energy generation in Australia.** In the event Australia decides to seriously consider nuclear energy generation, a roadmap should be developed that encompasses the above areas and sets out the steps that Australia should take with respect to its legal and regulatory infrastructure development.

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