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Submission on *Australian Naval Nuclear Power Safety Bill 2023*

1. Introduction

Submissions are being accepted on *Australian Naval Nuclear Power Safety Bill 2023*. The Bill is premised on the assumption that Australia will acquire nuclear-powered submarines under the AUKUS agreement between Australia, the United Kingdom and the United States of America. We remain hopeful that these submarines will not be acquired. As pointed out by former Prime Minister Paul Keating and many others, acquiring nuclear powered submarines would be a historic mistake. It would undermine Australia's sovereignty, negatively affect Australia's national security, create an unnecessary environmental and safety risk, and become a massive economic burden for Australian taxpayers for decades to come.

Refer to the articles listed in the References section at the end of this submission for arguments supporting this conclusion. While we don't necessarily endorse all the opinions expressed, the authors are eminently qualified and the articles present a variety of critical perspectives showing how the decision for Australia to acquire nuclear powered submarines is fatally flawed.

As these problems become clearer (not that they are not clear already, but as they become irrefutably obvious), it is conceivable that a wiser government will cancel the project. Indeed, due to its enormous cost and complexity, the project is most likely to end in failure anyway. We therefore recommend that the Bill be withdrawn and the project abandoned immediately.

We offer the following comments addressing the Bill directly, not because we believe it should be adopted with amendments, but to highlight some specific problems in case the government decides to go ahead with the project.

2. Why a new regulator, rather than include it under ARPANSA?

Section 100 of the *Australian Naval Nuclear Power Safety Bill 2023* ('the ANNPS Bill' or 'the Bill') would establish an Australian Naval Nuclear Power Safety Regulator ('ANNPS Regulator'), while Section 132 says, "The *Australian Radiation Protection and Nuclear Safety Act 1998* ['the ARPANS Act'] does not apply in relation to regulated activities."

The rationale for establishing a new regulator, rather than extending the role of the Australian Radiation Protection and Nuclear Safety Agency ('ARPANSA') to cover nuclear submarines, is unclear. In particular, the proposed Bill has the following disadvantages compared to including the regulation of nuclear submarines under ARPANSA.

(i) Given the limited pool of relevant expertise within Australia, it will be difficult to establish a new organisation with the capacity to regulate the construction, operation, maintenance, decommissioning, storing and disposal of the proposed AUKUS submarines and their nuclear fuel. It seems inevitable that a significant proportion of the staff will be recruited from ARPANSA, potentially weakening that organisation. It can also be expected that a substantial number of staff will be recruited from overseas. That could further weaken Australian sovereignty and potentially even create security risks.

(ii) There is a danger that a separate regulatory organisation, devoted specifically to AUKUS submarines, will be more at risk of regulatory capture. Although the legislation purports to ensure the organisation's independence, simply by virtue of the fact that AUKUS submarines are its raison d'être, it is likely to be biased in their favour and liable to regulatory capture.

(iii) The wording of The ANNPS Bill leads us to believe that the regulation of the AUKUS submarine program will lack transparency. The Bill does not include important transparency and public consultation requirements that exist in the ARPANS Act. For example, the ARPANS Act requires that a person be appointed to the Radiation Health and Safety Advisory Council, the Radiation Health Committee and the Nuclear Safety Committee to represent the interests of the general public. It also requires that consumer groups and environmental groups be consulted regarding the membership of these organisations. These requirements create a level of transparency and public consultation not provided under the ANNPS Bill. By exempting AUKUS nuclear submarines from the ARPANS Act, without offering any equivalent provisions, the ANNPS Bill will deprive the public of important protections.

(iv) Reporting requirements in relation to protection of public health and safety and the environment are seriously lacking. There are unexplained inconsistencies between the ANNPS Bill and the ARPANS Act in this regard. Section 41 of the ARPANS Act requires that if directions are given in order to protect the health and safety of people, or to avoid damage to the environment, or because "there is a risk of death, serious illness, serious injury or serious damage to the environment, arising from radiation", the Minister must table those directions in Parliament within 15 sitting days. Section 61(2) states, "If a serious accident or malfunction occurs at a nuclear installation, the CEO must cause a report about the incident to be tabled in each House of the Parliament no later than 3 sitting days after the incident occurs." There are no equivalent requirements in the ANNPS Bill. The nearest comparable requirement is found in Section 105. Under that section, directions given by the Minister to the Regulator "in the interests of national security and to deal with an emergency" must be tabled in Parliament within 28 calendar days or "the next sitting day of that House after the end of that period". Generally, the ARPANS Act requires more prompt reporting to Parliament, although that could depend on

whether Parliament is sitting at the time. However, there is no explicit requirement under the ANNPS Bill to report publicly about risks to health and safety, or risks to the environment. Section 21, which relates to reporting of nuclear safety incidents, only requires license holders to report to the Regulator. The Bill includes no equivalent obligation for the Regulator or the Minister to report publicly.

(v) The ANNPS Bill (Section 133) and the ARPANS Act (Section 9) have virtually identical provisions regarding their interaction with the *Nuclear Non-Proliferation (Safeguards) Act 1987*. However, whereas ARPANS Act (Section 84) requires that "the exercise of the power or discretion or the performance of the duty or function is authorised by this Act only to the extent that the exercise or performance **is not inconsistent with** Australia's obligations under the relevant international agreements", the ANNPS Bill (Section 136) only requires that "If this Act confers a function on a person, the person **must have regard to** Australia's obligations under any international agreement prescribed by the regulations in performing that function" (bold font added). The wording of the ANNPS Bill allows wriggle room that is not present in the ARPANS Act. We are concerned that the ANNPS Bill envisages situations where the acquisition of AUKUS nuclear submarines is inconsistent with Australia's international agreements: specifically, our obligations under the *Treaty on the Non-Proliferation of Nuclear Weapons* and the *Agreement between Australia and the International Atomic Energy Agency for the application of safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons.* This is particularly worrying given that AUKUS submarines are expected to use highly enriched uranium fuel and that they do not fall under the definition of 'peaceful use' understood in the abovementioned Treaty and Agreement.

The above comments are not intended to suggest that simply allocating the regulatory role to ARPANSA would solve all the problems, but a comparison between the ARPANS Act and the regulatory system proposed in the ANNPS Bill exposes significant defects in the latter. At the very least, these defects need to be fixed. And in the absence of convincing arguments in its favour, we see no benefit in establishing outside of ARPANSA a separate regulator for nuclear powered submarines. This issue is taken up again in section 3 below.

3. Issues raised by Radiation Health and Safety Advisory Council

The Chair of the Radiation Health and Safety Advisory Council (RHSAC) anticipated issues similar to those identified above in a letter to the CEO of ARPANSA dated 13 October 2022. These issues are not adequately addressed in the ANNPS Bill. Several relevant sections of the letter are quoted and discussed below.

<u>Safety</u>
"Council considers that there are challenges in Australia's federated and fragmented radiation regulatory system particularly as it relates to emergency preparedness, interstate transport,

and logistics; and radioactive waste which are key aspects of any future nuclear regulatory activities.

"Separate and unaligned nuclear and radiation regulatory frameworks, for example **a Commonwealth nuclear powered submarine regulator apart from existing jurisdictional radiation regulators, could present a risk to public safety**. While a separate nuclear regulator can provide adequate assessment and approvals processes, incident response needs 'boots on the ground' radiation incident response capability that will inevitably sit substantially within locally based agencies." (Bold font added.)

Independence and Transparency

"It is important that the framework does not allow 'national security' to mask inadequate radiation safety protection of the Australian public, weaken regulatory authority, or inhibit transparency on matters of Australian public safety."

"More than functional separation, it is important that the independent regulator can operate without influence, and with a strong voice. If a regulatory body cannot provide information on safety and incidents at licensed facilities without the approval of another organisation, issues of independence and transparency will arise. Reporting arrangements should therefore enable the regulatory body to be able to provide safety related information to the Government and the public with the maximum amount of transparency."

"The framework needs a mechanism that requires operators/licensees to make available relevant information that could have an impact on public health, safety and the environment, including nuclear and radiation safety management, discharges and emissions, incidents, near misses, and abnormal occurrences."

As noted in section 2 above, the Bill contains no requirement to inform the public of these matters and there is a greater danger that a separate regulator, specifically for nuclear submarines, would become captive to 'national security' interests.

Emergency response

"[N]ationally integrated emergency management arrangements do not exist for large scale radiological or nuclear incidents. The infrequency of radiological or nuclear emergencies of significance within Australian jurisdictions means that the arrangements for this type of emergency have not been adequately tested, nor provided opportunity for reflection and review, limiting development and enhancement.

"This limitation affects both national and state/territory emergency preparedness, and is reflected in the recommendations from the 2018 IAEA IRRS review. **The national strategy for radiation safety acknowledges the limitations of emergency management arrangements in Australia. They are not fit for purpose for a future with nuclear powered submarines.** Council considers that by strengthening ARPANSA's overall emergency preparedness, and by taking a leadership role in advocating for enhanced national and jurisdictional capability, this will enhance the ability of a future regulator to assess the emergency preparedness plans of regulated entities, such as the nuclear-powered submarines program." (Bold font added.)

The Bill makes no reference to emergency preparedness planning. This is extraordinary, given that the radiological risk associated with nuclear submarines is an order of magnitude higher than that posed by any other technology that Australia has dealt with. For example, the power output of nuclear powered submarines (over 200 MW[1]) is much greater than that of the OPAL reactor at Lucas Heights (20 MWth). The higher power output means that there is a much greater amount of radioactivity that could potentially be released into the environment if there was an accident. There is also the important consideration that nuclear submarines and their associated facilities could become targets of attack in time of war. Hence the potential for catastrophic accidents is inherent to their role.

Australia has experience with visits by foreign nuclear powered vessels, but these visits have been of short duration. The Medical Association for Prevention of War "found **wide variation** in the quality and availability of emergency management plans". Under the AUKUS agreement, submarines would be based in Australian ports, potentially with several submarines in port at the same time, including in Port Adelaide where nuclear vessels have never before visited.

Bearing these matters in mind, and in view of the already inadequate nuclear emergency management arrangements in Australia, the legislation should require that emergency preparedness plans that are "fit for purpose" be made a precondition of the awarding of any licences related to nuclear powered submarines. Furthermore, as RHSAC states, "'national security' [must not be allowed] to mask inadequate radiation safety protection of the Australian public." There must be complete transparency and public involvement in the development of these emergency preparedness plans.

<u>Nuclear non-proliferation</u>

"Regulation of any nuclear-powered submarine program must not undermine the integrity of the international nuclear non-proliferation regime currently overseen by the Australian Safeguards and Non-Proliferation Office (ASNO). Any agreement Australia reaches with the IAEA to facilitate the possession of nuclear-powered submarines should continue to ensure the IAEA's safeguards system operates effectively with access to facilities by IAEA safeguards inspectors."

As mentioned in section 2 above, we are concerned that the ANNPS Bill envisages situations where the acquisition of AUKUS nuclear submarines is inconsistent with Australia's international nuclear non-proliferation obligations. Legislation for the regulation of nuclear submarines must require that any activities are consistent with Australia's obligations under international non-proliferation agreements, with no exceptions.

[1] 210 MW ('*Virginia*-class submarine', *Wikipedia*), or 260 MW (Environment and Other Legislation Amendment (Removing Nuclear Energy Prohibitions) Bill 2022, August 2023, Coalition Senators' Dissenting Report.)

4. Other Issues

(i) Radioactive waste

The Bill covers managing, storing and disposing of 'NNP material'. The regulator may issue licences for such activities and related facilities. However, it is important to acknowledge Australia's poor history with regard to management and siting of existing radioactive waste. As former Senator Rex Patrick points out, "Australia has been searching for a site for a National Radioactive Waste Management Facility (NRWMF) site since the 1970s; and after 50 years, it still hasn't found a spot on which to safely establish such a repository" (Patrick 2023). It should not be taken for granted that Australia will be able to successfully deal with highly radioactive long-lived spent nuclear fuel from nuclear submarines (which, despite assurances to the contrary, includes foreign spent fuel from Virginia class submarines purchased mid-life from the US). Australia is not alone in this problem. Nearly 80 years since the first atomic bomb test and 70 years since the world's first nuclear power station commenced operation, no country in the world has succeeded in disposing of its spent nuclear fuel. Finland is the most advanced in this regard, with construction of a repository nearing completion. Most countries have not even reached the stage of selecting a site. This is why people say nuclear power is "like a house without a toilet".

Australia must not acquire nuclear submarines that are "without a toilet" for their spent nuclear fuel and other radioactive waste. The surest way to prevent this is to require that a solution be in place before fuel for nuclear submarines is accepted into Australia. In view of the failure of Australia and other countries to deal with their nuclear waste, this requirement should be specified in legislation from the outset. Australia's numerous unsuccessful attempts to impose nuclear waste dumps on unwilling communities clearly demonstrate that any disposal site should be selected on the principles of free, prior and informed consent.

(ii) Override of state and territory legislation

Section 135 states, "If a law of a State or Territory, or one or more provisions of such a law, is prescribed by the regulations, that law or provision does not apply in relation to a regulated activity." Rather than trying to override State and Territory laws, such as South Australia's *Nuclear Waste Storage Facility (Prohibition) Act 2000*,[2] the Commonwealth should focus on fixing the problems raised by RHSAC in its 13 October 2022 letter to the CEO of ARPANSA quoted above. It should aim to integrate the "separate and unaligned nuclear and radiation regulatory frameworks" and emergency management arrangements referred to in that letter. The principles of free, prior and informed consent should undergird its dealings with local

[2] Section 3 states, "The Objects of this Act are to protect the health, safety and welfare of the people of South Australia and to protect the environment in which they live by prohibiting the establishment of certain nuclear waste storage facilities in this State."

communities and State and Territory governments.

5. Conclusion

Near the end of his government's term in office, after a process that was kept secret from most Cabinet members, former Prime Minister Morrison announced that Australia would acquire nuclear powered submarines. A disastrous decision was made after an appalling decision-making process. It is lamentable that the leadership of the Labor Party, which was then in opposition, did not have the courage to repudiate the decision then and there, or at least withhold support until it had conducted a proper review of the implications of the decision. It is not too late to reverse the decision. The sooner the project is cancelled, the less the sunk cost and the less damage it will cause to national and international security, and to public safety.

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