*IPAN Vision: An independent and peaceful Australia*

# Public Submission to the Inquiry into Environment and Other Legislation Amendment (Removing Nuclear Energy Prohibitions) Bill 2022

## Prepared by
## the Independent Peaceful Australian Network (IPAN)

## January 2023

Independent and Peaceful Australia Network (IPAN)
PO Box 573 Coorparoo Brisbane Qld Australia 4151
ipan.australia@gmail.com
www.ipan.org.au

**Abbreviations**

| | |
|---|---|
| **ACF** | The Australian Conservation Foundation |
| **ADF** | Australian Defence Force |
| **ANZUS** | Australia New Zealand United State |
| **ARPANS Act** | Australian Radiation Protection and Nuclear Safety Act 1998 |
| **AUKUS** | Australia, United Kingdom, United States |
| **EPBC Act** | Environment Protection and Biodiversity Conservation Act 1999 |
| **GHG** | Greenhouse Gas Emissions |
| **ICAN** | International Campaign to Abolish Nuclear Weapons |
| **IPAN** | Independent Peaceful Australia Network |
| **NPT** | Treaty on the Non-Proliferation of Nuclear Weapons |
| **NT** | Northern Territory |
| **TPNW** | Treaty on the Prohibition of Nuclear Weapons |
| **UK** | United Kingdom |
| **UN** | United Nations |
| **US** | United States |

**About IPAN**

IPAN is a national umbrella organisation of community, peace, faith and environmental groups and trade unions around Australia with an interest in peace and security. IPAN aims to build public dialogue and pressure for change to a truly independent foreign policy for Australia – one in which our government plays a positive role in solving international conflicts peacefully.

The announcement of the Inquiry into Environment and Other Legislation Amendment (Removing Nuclear Energy Prohibitions) Bill 2022 comes at a very critical time for our country.

IPAN feels very strongly about providing a contribution to this inquiry and seeks to make comments on the proposal to both amend the *Australian Radiation Protection and Nuclear Safety Act 1998* to remove the prohibition on the construction or operation of certain nuclear installations; and to amend the *Environment Protection and Biodiversity Conservation Act 1999* to remove the prohibition on the Minister for Environment and Water declaring, approving or considering actions relating to the construction or operation of certain nuclear installations. These Acts currently expressly prohibit the approval, licensing, construction, or operation of a nuclear fuel fabrication plant; a nuclear power plant; an enrichment plant; or a reprocessing facility.

Australia currently faces rapidly changing strategic circumstances, global instability and planetary threats to human security. This set of interlinking challenges, among others, requires an urgent and holistic response from the Australian government.

Recognising the circumstances outlined above, in 2020 IPAN initiated its own national public inquiry to 'Explore the Case for an Independent and Peaceful Australia' (the People's Inquiry) so as to determine a path that would lead Australia towards a genuinely independent, peaceful and secure defence and foreign policy.

*IPAN led 'People's Inquiry: Exploring the Case for an Independent and Peaceful Australia'*

The People's Inquiry comprehensively questioned the foundations and assumptions underpinning the cornerstone of Australia's security – the Australia-US Alliance – across several impact areas: military and defence, foreign policy, First Nations peoples, politics, society, workers, economy, and the environment.

The People's Inquiry received 283 submissions from individuals and organisations across the country. An interim report was released in October 2021 and the full report was released on 22 November 2022.

IPAN's submission to this current inquiry draws, in part, on the findings and recommendations of the People's Inquiry, specifically those related to the area of impact on First Nation's people, military and defence, foreign policy and the environment. In particular, some submissions focused directly on issues surrounding nuclear energy including concerns around storage of nuclear waste and consultation around land use (IPAN 2022a. pp.21,23).

For a full copy of the Inquiry Report go to **https://independentpeacefulaustralia.com.au/**

## Introduction

### IPAN'S interest in matters related to nuclear energy, nuclear installations and nuclear weapons

IPAN has had a longstanding concern about nuclear issues, as a network of organisations and individuals motivated by the desire to see peaceful resolutions to international conflicts and greatly concerned that our world never sees a nuclear bomb dropped again – in particular such as the two bombs dropped on Hiroshima and Nagasaki in 1945, leading to the immediate and subsequent deaths of over two hundred thousand people.

To this end, IPAN (and many member organisations and individual members) has been a very strong supporter of the international Campaign to Abolish Nuclear Weapons (ICAN) regarding the adoption of a UN treaty to prohibit nuclear weapons – i.e. the Treaty on the Prohibition of Nuclear Weapons (TPNW).

IPAN has been heartened by the positive steps that have been taken by the new Federal government, in attending the first Meeting of States Parties to the TPNW in Vienna in June and ending Australia's opposition to the treaty by abstaining on a resolution at the UN First Committee after the previous government's practice of voting "no".

IPAN also has many member groups from the environment sector who are very concerned about the costs and risks associated with the use of nuclear energy.

## Proposed Amendments to Federal Legislation

IPAN is concerned about the proposals in the bill to amend the *Australian Radiation Protection and Nuclear Safety Act 1998* to remove the prohibition on the construction or operation of certain nuclear installations; and in the *Environment Protection and Biodiversity Conservation Act 1999* to remove the prohibition on the Minister for Environment and Water declaring, approving or considering actions relating to the construction or operation of certain nuclear installations.

## IPAN's broad concerns with the use of nuclear power

First and foremost, IPAN believes that radiation is dangerous to people and the environment and that it is critical to reduce human exposure to it. In addition, IPAN believes that the adoption of nuclear power in Australia would increase electricity costs, slow the transition to a low-carbon economy and introduce the potential for catastrophic accidents.

IPAN is also concerned about the water resources required for the production of nuclear energy, with huge volumes required for the production of nuclear energy. We are also concerned about the contentious issue of where to store nuclear waste, given the associated long-term risks of storage.

This submission therefore makes a number of key points in relation to the proposed amendments to the two acts – which if adopted would remove the blanket prohibition on the construction or operation of certain nuclear facilities. IPAN believes that the current blanket prohibition acts as a very important safeguard against the risks and dangers associated with the nuclear industry – and that to remove this blanket prohibition would be to the detriment of the Australian community, the environment and the Australian ecosystem.

## Factors for the Senate Standing Committees on Environment and Communications to consider in its decision regarding the proposed amendments

### 1 The dangers of radiation and risks of human exposure

IPAN believes that the risks of people being exposed to the harmful effects of radiation are one major concern and a reason to continue with the current prohibition. There are significant issues in terms of safety, worker health in relation to the risks of exposure to radiation as well as regulatory deficiencies (see also next section).

The fall-out from the Fukushima nuclear disaster is well documented and it has been confirmed that "Australian obligated nuclear material [AONM[i]] was at the Fukushima Daiichi site and in each of the reactors...." (Dr Robert Floyd, Director General, Australian Safeguards and Nuclear Safety Org, cited in the Australian Conservation Foundation (ACF) and the International Campaign to Abolish Nuclear Weapons (ICAN) 2022). The impacts of such a disaster are ongoing, with impacts on health, employment, the environment and family connection and livelihoods, as well as negatively impacting on sleep and alcohol and other drug use. The world simply cannot afford another Fukushima, and Australia must do everything it can to avoid a similar situation.

The nuclear issue was repeatedly raised in submissions made to the IPAN People's Inquiry, which highlighted that "Putting nuclear reactors in warships risks radioactive pollution on a scale comparable with major accidents like Chernobyl or Fukushima, while the existence of some 13,000 nuclear weapons across the globe poses an existential threat to civilisation" (IPAN 2022, p.71).

Submissions to the IPAN People's Inquiry also raised significant concerns about the Australian government's announcement regarding its intention to try to obtain US or UK nuclear submarines (AUKUS deal), which submitters considered was a very dangerous move, as putting nuclear reactors in vessels which will be legitimate targets in any serious conflict clearly "invites catastrophic radioactive pollution of the oceans". And the very idea was seen as "foolhardy". (IPAN 2022a, p.74). While "conventional warfare is very destructive of the natural environment", the "potential of nuclear war is very many times worse" with the report highlighting that we "must develop more civilised ways of resolving disputes" (IPAN 2022a, p.74).

Various submissions to the IPAN People's Inquiry voiced concerns at the increased dependence on foreign defence technology and know-how necessarily associated with the recent AUKUS defence pact. Dale Hess and Adrian Glamorgan (2021, p. 4 cited in IPAN 2022a, p.95) point out that 'nuclear-powered submarines are very complex, and maintenance and operational activity will require Australia to rely on and become more deeply embedded in US and UK technical support systems. The consequence is loss of sovereignty and the ability to act independently'. Quakers Australia is worried that 'this partnership shifts Australia's military posture from defensive to offensive, increasing the potential for Australia's participation in US-led regional incursions, including through the use and transport of nuclear weapons'" (Quakers Australia, 2021, cited in IPAN 2022a, p.95).

The People's Inquiry report also highlighted that "AUKUS is likely to give US nuclear-armed warships and military aircraft unlimited access to Australian military locations. This would make Australia a US war platform so that any US enemy would become Australia's enemy". It is also possible that such a development "would open the way to establishing a nuclear weapons industry in Australia" (IPAN 2022a, p. 50).

## 2. Lack of compliance in the uranium mining industry.

The ACF/ICAN (2022) have identified that the Australian experience of the uranium industry shows that "the uranium sector is high risk and low return", and it further argues that this "is also true for the wider nuclear sector".

Australia has a poor history of mine rehabilitation broadly, and this is especially the case with the rehabilitation of uranium – with the Rum Jungle mine in the NT a case in point (ACF/ICAN 2022). While this mine closed 51 years ago, "it was never properly rehabilitated and acid and metals have been leaching into parts of the nearby Finniss River ever since" (Everingham, 2018).

In 2003 a Senate Inquiry into Uranium Mining found that there was "a pattern of under-performance and non-compliance" in the uranium mining industry and it recommended that there be urgent changes "in order to protect the environment and its inhabitants from serious or irreversible damage" (Senate ECITA Committee 2003, p. iv). The Senate Inquiry concluded "that short-term considerations have been given greater weight than the potential for permanent damage to the environment".(Senate ECITA Committee 2003, p. iv).

Parallels have been drawn between nuclear energy and asbestos. There is no debate about the fact that uranium is an effective form of energy by heating water, turning a turbine and producing electricity – but it comes "at a high economic, social, public health and environmental cost" (ACF/ICAN 2022).

Associate Professor Gavin Mudd (Department of Environmental Engineering at RMIT University) has made the observation that "Uranium mining is different to other types of mining. Australia's uranium mining sector has been dominated by license breaches, accidents, spills and a persistent failure to rehabilitate as promised" (Mudd 2020, cited in Don't Nuke the Climate Australia, 2020, p.1)

As outlined below, there are cheaper, cleaner, faster and more assured options through the continued development and expansion of sustainable renewable options (ACF/ICAN 2022).

The ACF/ICAN (2022) have also argued that Australia's uranium sector should be phased out, in a similar way to the way that Australia made a social decision to not mine, use or export our extensive asbestos resources – both of these resources are safer in the ground.

## 3. The links between nuclear technology and military nuclear technology'

IPAN is in particular concerned with the links between civil nuclear technology and military nuclear technology. The ACF have highlighted that uranium is a "dual use fuel and nuclear is a dual use technology – it can power a reactor or a weapon" and they have described how the current conflict in Ukraine has seen "the weaponization of nuclear facilities and the threat of an uncontrolled radiation release", even if the Russian army does not use its nuclear weapons (ACF 2022a, p.1 cited in IPAN, 2022, p. 71).

The development of nuclear energy could be seen as a slippery slope to the eventual development of nuclear-powered weapons and even nuclear weapons themselves. It is important to recognise that nuclear power programs have provided cover for numerous weapons programs over many years. An expansion of nuclear power would simply worsen the situation.

As former US Vice President Al Gore articulated in 2006: "For eight years in the White House, every weapons-proliferation problem we dealt with was connected to a civilian reactor program. And if we ever got to the

point where we wanted to use nuclear reactors to back out a lot of coal ... then we'd have to put them in so many places we'd run that proliferation risk right off the reasonability scale" (cited in Jim Green 2014).

Nuclear reactors are pre-deployed military or terrorist targets. The current situation in Ukraine illustrates the risks: electricity supply necessary for reactor cooling has been repeatedly disrupted by military strikes, posing serious risks of nuclear core meltdowns. Prior to Russia's recent attack on Ukraine, there have been numerous military attacks on nuclear plants, including in Iraq in both 1981 (Israel destroyed a research reactor) and 1991 (the US destroyed two smaller research reactors) and in 2007 in Syria (when Israel bombed a suspected nuclear reactor). There have also been several attempted military strikes, such as Iran and Iraq attempting to strike each other's nuclear facilities during their war between 1980-88; and Iraq attempted missile strikes on nuclear facilities Israel's in 1991.

The current ban on nuclear energy in Australia provides a very important safeguard to avoid any chance of the eventual development of nuclear-powered weapons and even nuclear weapons themselves. We must continue this ban.

Lost Nuclear Weapons

Disturbingly, as highlighted by Zaria Gorvett (2022) 'The US has lost at least three nuclear bombs that have never been located'. This begs the question of how this can be and what is the environmental damaged being wreaked, with three bombs "still out there to this day, lurking in swamps, fields and oceans across the planet." A further reason to avoid any chance of going down the slippery slope of nuclear energy to nuclear powered weapons, to nuclear weapons themselves.

## 4. The Costs of Nuclear Power

As pointed out in the second reading speech (by Senator Matt Canavan) of the 'Environment and Other Legislation Amendment (Removing Nuclear Energy Prohibitions) Bill 2022 Wednesday, 28 September 2022, the building of a nuclear plant requires high capital costs and long construction times. While the Senator also argues that nuclear plants have relatively low operating costs - other factors must be considered, such as the cost of rehabilitation of mines and the cost of storage of nuclear waste, as well as the many risks involved.

There have also been huge budget overruns at existing nuclear facilities and with newly built reactors. In the UK, for example, with Hinkley C**,** the first new nuclear power station which has been built in the UK in over 20 years, the nuclear plant will cost up to £2.9bn ($5.09B AUD) more than initially thought, with the final cost as high as £22.5bn ($A39.5B AUD).

The ACF/ICAN have highlighted that the "nuclear sector remains actively contested and does not enjoy broad social license" (ACF/ICAN 2022). While the second reading of the bill mentioned that the 2022 Lowy Institute poll earlier this year found that just over half of respondents (52%) would support removing the ban on nuclear power; there is also still nearly half of all respondents (45%) who oppose the removal of the existing ban. It is worth noting that only a year earlier, public opinion showed that just over half of respondents (51%) did not support removing the ban on nuclear power; while 45% supported the removal of the existing ban (Lowy 2022). So, it is fair to say that there is not overwhelming support for nuclear energy.

## 5. The Costs of nuclear energy vs renewable energy sources

IPAN believes that it is important to address a number of the claims made by Senator Canavan in the Second reading Speech (Australian Parliament 2022), for example where he asserted that "The relative costs of nuclear compare well to renewable energy. Between 1965 and 2018 the world spent $2 trillion on nuclear compared to

$2.3 trillion for solar and wind, yet nuclear today produces around double the electricity than that of solar and wind." He also added that costs may reduce soon.

As figures from Lazard Asset Investment (2021) in their annual Levelized Cost of Energy, Levelized Cost of Storage, and Levelized Cost of Hydrogen Report showed, the cost of nuclear energy is far greater than that of renewables, as per the following table.

**'Levelised costs of electricity' for Nuclear, Wind (Onshore) and Solar PV (Utility Scale)**

*"Levlised Cost of Energy Comparison – Unsubsidized Analysis" "Selected renewable energy generation technologies are cost-competitive with conventional generation technologies under certain circumstances"*

| | US$ | A$ |
|---|---|---|
| • Nuclear | $131–204 | $196–305 |
| • Wind (Onshore) | $26–50 | $39-75 |
| • Solar PV (Utility scale) | $28–41 | $42-$61 |

*Figures taken from Table in Lazard 2021 (*See also full Lazarrd Table in Appendix)

*Note: "Lazard's 2021 Levelized Cost of Energy Analysis (LCOE 15.0) shows the continued cost-competitiveness of certain energy technologies on a subsidized basis and the marginal cost of coal, nuclear and combined cycle gas generation"*

The costs of renewable technologies continue to decline globally, albeit at a slowing pace, reflecting reductions in capital costs, increased competition as the sector continues to mature and continued improvements in scale and technology. "Since 2010, the cost of energy has dropped by 82% for photovoltaic solar, by 47% for concentrated solar energy (CSP), by 39% for onshore wind and by 29% for wind offshore." (

Unlike the costs of wind and solar, the cost of nuclear power has actually risen over time, since 2008, the "projected cost of new nuclear power has risen by fourfold…and it is still rising".

These figures are backed up by recent research from CSIRO and the national energy market operator (the Australia Energy Market Operator (AEMO), with the 2022 CSIRO-AEMO GenCost report also showing that nuclear power is simply not competitive with renewables, with 2030 cost estimates for Australia as follows

• A$136-326/MWh for Nuclear (small modular):

• A$61-82/MWh for 90 percent wind and solar PV with integration costs (transmission, storage and synchronous condensers) necessary to allow these variable renewables to provide 90 percent of electricity in the National Electricity Market. (CSIOR/AEMO, 2022).

IPAN believes that there is simply no economic case for nuclear power in Australia.

Senator Canavan also referred to the trials of Small Modular Reactors that are happening in a range of countries currently and that "if they become a commercial prospect, their modular nature may deliver substantial cost savings through mass production".

The ACF/ICAN have made the very clear point that SMRs however are unproven and do not actually make electricity in the real world, and further to this, the US Academy of Science in 2018 stated that "several hundred billion dollars of direct and indirect subsidies would be needed to support their development and deployment over the next several decades" (cited in ACF/ICAN 2022).

In addition, the UN special adviser on Climate, Mark Carney, at CoP 26 (cited in ACF/ICAN 2022) remarked in relation to SMR's that it would be "reckless and irresponsible" to rely on future promised technology solutions.

The ACF/ICAN "maintains that 'next generation' nuclear is not a credible energy response. In addition, they argue that "the pursuit of nuclear power in Australia makes no sense" in the context of cheaper, cleaner, faster and more assured options (ACF/ICAN 2022).

The pursuit of nuclear energy would in fact "slow the transition to a low-carbon economy, increase electricity costs and unnecessarily introduce challenges and risks associated with high-level nuclear waste management including the potential for catastrophic accidents, with profound inter-generational economic implications for Australian taxpayers" (ACF 2022b).

As the past Chair of the US Nuclear Regulatory Commission, Professor Allison Macfarlane, remarked in 2021 (cited in ACF/ICAN 2022)

> when it comes to averting the imminent effects of climate change, even the cutting edge of nuclear technology will prove to be too little, too late"

There are huge opportunity costs in the pursuit of the use of nuclear power - spending precious financial resources required for other social needs and the pursuit of renewable energy options.

## 6. Environmental Impacts

Urgent and Effective Action required

The chaotic climate events that have punished Australia in recent years demand urgent and effective action. That urgency disqualifies the most expensive and slowest response (as outlined immediately above). In this way, expense is not simply a consideration for investors. In addition, the imperative to better manage climate change is a strong argument against nuclear power.

Storage of Nuclear Waste

IPAN is concerned that despite years of debate and attempted negotiations around the storage of nuclear waste, it is now 2023 and there is still no agreement on a proven solution to manage or isolate and dispose of high-level radioactive waste that has been produced in power reactors. Currently there is not one single operating deep underground repository for high-level nuclear waste across the world.

The US (in New Mexico) does have one deep underground repository for long lived intermediate-level nuclear waste, namely the Waste Isolation Pilot Plant (WIPP) – but even this has been highly problematic. AS Jim Green and Nuclear Monitor (2014) have highlighted, there was a chemical explosion in 2014 which ruptured one of the nuclear waste barrels stored underground there, and the filtration system, which is designed to prevent radiation from reaching the outside environment, failed. This then led to twenty-two of the workers there being exposed to low-level radiation forcing WIPP to close for three years. Of great concern is the fact that "The Accident Investigation Board report states that personnel did not adequately recognize, categorize, or classify the emergency and did not implement adequate protective actions in a timely manner" (cited in Jim Green and Nuclear Monitor, 2014).

Another very significant factor is the extreme reluctance on the part of communities earmarked as a site or potential site for nuclear waste. There are clear issues of racism in the choice of nuclear waste dump sites.

A pertinent point is made by Native American activist, Winona LaDuke,

> The greatest minds in the nuclear establishment have been searching for an answer to the radioactive waste problem for fifty years, and they've finally got one: haul it down a dirt road and dump it on an Indian reservation.

Three years of electricity in a reactor leaves a legacy of 100,000 years of waste – a massive inter-generational burden, which represents a "Poor risk to return ratio" and damage to the environment for hundreds of thousands of years.

Another factor relating to wase is the fact that more reactors make the decades-long intractable problem of long-lived wastes even more difficult to address. Nuclear power is unlicensable in the absence of an interim waste facility. And assent to siting a nuclear waste dump is untenable in the context of unbounded waste. A fundamental principle of responsible waste management is minimisation. Those communities who might entertain the possibility of hosting a Commonwealth facility would be deterred by prospect of widespread deployment of new nuclear power reactors across Australia. In this way, the Bill acts as a disincentive to those who might consider a role in contributing to responsible management of existing legacy wastes.

Water resources required

There are also significant issues around the water resources required for the production of nuclear energy, with a huge volume of precious and at times scarce water resources required on an ongoing basis for the production of nuclear energy. As an example from Australia, the Mulga Rock uranium project (200 kms east of Kalgoorlie – near the Queen Victoria nature reserve in the Great Victoria Desert), one of four proposed uranium mines given approval by WA's former Liberal-National government Environmental approvals, would see the "extraction of 15 million litres of water per day, would create 32 million tonnes of tailings, threatens vulnerable species including the Sandhill Dunnart" (ACF/ICAN 2022).

---

The Climate Council Australia 2020 (cited in Don't Nuke the Climate Australia, 2020, p.2) summarise their concerns as follows: "Nuclear Power stations are not appropriate for Australia – and probably never will be... it makes no sense to build nuclear power in Australia. Nuclear power stations are highly controversial, can't be built under existing law in any Australian state or territory, are a more expensive source of power than renewable energy, and present significant challenges in terms of the storage and transport of nuclear waste, and use of water".

## 7. Australia's current independent stance in banning nuclear energy

AS rightly pointed out, by Senator Canavan in the Second Reading Speech, Australia is "the only developed country, only G20 country in the world that actually bans nuclear energy (which has been in effect since the 10 December 1999 decision of Federal Parliament Australia is also one of only three countries within the 20 richest nations in the world to not have nuclear energy, along with Saudi Arabia and Italy, though "Saudi Arabia is building a nuclear power station and Italy gets much of its imported electricity from France, where three quarters of the electricity is produced by nuclear". Australia has therefore remained strong in its ban on nuclear energy – and this must be a cause of celebration, not derision. IPAN feels that it is disingenuous of Senator Canavan to refer to Australia's "status as a nuclear outcast". While Senator Canavan highlights the fact that "Australia has the largest reserves of uranium in the world" – this is not a reason to develop nuclear energy, for all of the reasons that IPAN is highlighting in this submission.

The second reading highlights the recurrent range of uses (for power and propulsion; and in shipping) and prevalence of nuclear energy currently globally (across 31 countries) and the potential for an increase in global nuclear power capacity as a sound justification for Australia also pursuing nuclear energy options

IPAN argues that the prevalence of the development of nuclear energy in other countries is not a sound basis for introducing this to Australia, especially when there are so many cheaper, cleaner, faster and more assured

options through the continued development and expansion of sustainable renewable options, as mentioned previously.

## 8. Decisions about investing in nuclear energy

IPAN has concerns about Senator Canavan's assertion that "The potential for high costs is not a reason to ban anyone building a power station" and that "Decisions about the relative profitability of different investments should be left to the businesses making those decisions". This is not how public policy works. There are a range of processes and provisions that must be worked through with any public policy decision, with environmental impact assessments being one such example. Decisions such as these cannot happen in a void or be left purely to the market (usually subsidised, in the case of nuclear power).

It also seems rather bewildering that the Senator also makes the seemingly very obvious comment that "Our environmental laws should focus on protecting Australia's natural environment.". The proposal to amend the two Acts in question represents precisely the kind of scenario where environmental laws should come in to play - to assess any negative impacts on the natural environment that would result from future use of nuclear energy in Australia.

## 9. Previous Inquiries regarding nuclear energy in Australia

A number of recent and very recent inquiries are very relevant to the issues being examined in this current inquiry. It is fair to say each of the three inquiries listed did not come out favourably for the nuclear industry.

- 2019: Inquiry into the prerequisites for nuclear energy in Australia https://www.aph.gov.au/nuclearpower
- 2016: SA Nuclear Fuel Cycle RC http://nuclearrc.sa.gov.au/
- 2006: Uranium Mining Processing and Nuclear Energy Review (UMPNER) https://catalogue.nla.gov.au/Record/3960972

The 2006 UMPNER was particularly comprehensive and very well resourced and contained a relatively high proportion of people who were pro-nuclear – yet it concluded with a resounding, reluctant 'no'.

## 10. Impact on First Nations peoples

First Nations' peoples and their lands are especially impacted by the nuclear industry, both historically (since the UK nuclear bomb tests of the 1950s in outback South Australia) and presently.

As a very current example, and highlighted in the IPAN People's Inquiry (2022, p.23), the Napandee site (near Kimba on the Eyre Peninsula) proposed by the Federal Government as a national radioactive waste facility is a contested site (Gooch 2021). In late 2021, Traditional Owners the Barngarla people voiced their concerns about being excluded from discussions (and the voting process) with local landholders and townspeople and about the choice of site for a nuclear waste facility which they felt "amounted to systemic racism" (Gooch 2021).

To make matters even worse, in mid-November 2022, the Federal Resources Minister Madeleine King confirmed preliminary earthworks ('site characterisation works)' were set to commence that week. This is despite the fact that there was still a current Federal Court challenge underway, by Barngarla Native Title holders, in relation to whether the former government's selection of the site was valid (ACF 2022d).The Federal government had provided repeated assurances that it would not pre-empt the outcome of the Federal court decision, so the commencement of the earthworks is clearly inconsistent with this – and flies in the face of broader government rhetoric about reconciliation and improving consultation processes with First Nations peoples.

## 11. Human rights issues

Regarding the addressing of human rights implications in the proposed amendments, IPAN does not believe that the Senators bringing the proposed amendments to parliament have sufficiently addressed human rights issues related to the amendments.

While the bill states "This Bill is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011"*, no evidence is provided. Nor do the one-line statements that **"**This Bill does not engage any of the applicable rights or freedoms" or that "This Bill is compatible with human rights as it does not raise any human rights issues" represent a sufficient response to addressing any human rights implications or actually demonstrate that there are no human rights issues that could arise as a consequence of the proposed amendments.

There are clearly human rights implications whenever there is a proposal for the introduction or use of a substance or material that has the potential for catastrophic accidents and where there are inherent risks and challenges, such as those associated with the use of nuclear energy and high-level nuclear waste management. The exclusion of First Nations Peoples from their traditional lands used as the waste repository site represents a major denial of the human rights of those First Nations Peoples.

The right to liberty and security of person is enshrined in the Universal Declaration of Human Rights (UDHR). Article 3 of the UDHR states, **'Everyone has the right to life, liberty and security of person'.** This year is the 75th anniversary of the UDHR, and it seems it is more relevant than ever that nuclear energy and nuclear weapons both threaten the rights of people to security. The proposed amendments do indeed represent significant human rights issues.

## 12. Why Australia should sign and ratify the Treaty on the Prohibition of Nuclear Weapons (TPNW)

Risks of Nuclear War and Australia's current 'policy' of Extended nuclear deterrence
(Adapted from IPAN Submission to the Defence Strategic Review (October 2022, p.19-20)

The Australian Government's Defence Policy response to the risks of nuclear war is tied to the policy of "extended nuclear deterrence." The only credible nuclear threat to Australia derives from our participation in US nuclear warfare via Pine Gap, which is officially accepted as a likely high-priority nuclear target of both Russia and China. Security benefits aside, relying on the US to decimate millions of innocent people in Australia's defence is morally repugnant.

Extended nuclear deterrence does nothing to protect Australia against the existential impacts of nuclear war between nuclear-armed states, as several recent scientific studies on the horrific implications of "nuclear winter" attest. The risk of nuclear war by accident or design has reached unprecedent heights, even more so in the context of the recent Russia-Ukraine war, and will continue to rise if climate disruption continues unabated.

As nuclear-armed states continue their long march in the opposite direction to the NPT's obligation to negotiate for disarmament, Australia's security interests demand that we sign and ratify the United Nations (UN) Treaty on the Prohibition of Nuclear Weapons (TPNW) to stigmatise these states into serious action, including our ally the United States. Undertaking such action, it must be noted, need not imperil the US alliance.

Contributors to the IPAN Inquiry broadly argued that investing in peace through diplomacy, economic development and 'soft power' would go a long way towards addressing the most urgent and grave threats to

Australia, as well as also recognise the necessity of addressing traditional military threats - contributors focused on the critical need to address climate change and environmental issues.

Contributors also asserted that Defence should remain acutely focussed on the capability to independently secure Australia against the fundamental international risk of a direct armed attack on Australian territory and leave the projection of national power to shape a favourable regional and international order to the tools of statecraft other than organised lethal violence.

"The existence, the threat or the actual use of nuclear weapons, independently by which country or under whatever circumstances, is a violation of the Universal Declaration of Human Rights**.** Therefore, all nuclear states and their allies are obliged to enter negotiations in order to prohibit nuclear weapons in all forms." (Jaschek, 2021).

As part of this it is imperative that we resist overtures to develop nuclear energy and encourage and assist other countries to cease or desist from developing nuclear energy, so that the slippery slope towards the development of nuclear weapons can be avoided.

## Recommendations

IPAN submits the following recommendations to the Senate Standing Committees on Environment and Communications

**Recommendation 1**

**Reject the proposed amendments to bills**

The Senate Standing Committees on Environment and Communications maintain the status quo in relation to the Australian Radiation Protection and Nuclear Safety Act 1998 and the Environment Protection and Biodiversity Conservation Act 1999.

**Recommendation 2**

**Threat priorities**

The Australian Government should prioritise as a matter of urgency:

(a) The two existential threats of climate change and nuclear war, and we support joining the Treaty on the Prohibition of Nuclear Weapons. Prioritising climate change would necessitate a re-orientation of the role of the Australian Defence Force (ADF).

**Recommendation 3**

**Nuclear energy**

The Australian Government should legislate the use of warships or submarines that only use a non-nuclear energy source.

## References

Australian Conservation Foundation (ACF) and International Campaign to Abolish Nuclear Weapons (ICAN)(2022) Powerpoint presentation at Yami Lester Memorial Address, Mparntwe/Alice Springs, 6 August 2022 (Internal ACF/ICAN Document).

Australian Conservation Foundation (ACF) (2022a) Submission to IPAN People's Inquiry, November 2022. https://independentpeacefulaustralia.com.au/wp-content/uploads/2022/10/427-ACF.pdf

Australian Conservation Foundation (ACF) (2022b) Nuclear power is dirty, dangerous and wildly expensive. Our shared energy future renewable, not radioactive, NUCLEAR FREE 05 OCTOBER 2022

Australian Conservation Foundation (ACF) (2022c) ACF Wrong Reaction: Why 'next -generation' nuclear is not a credible energy solution' NUCLEAR FREE 05 OCTOBER 2022

Australian Conservation Foundation (ACF) (2022d) Radioactive waste works 'pre-emptive and unjustified' NUCLEAR FREE 15 NOVEMBER 2022

Australian Parliament (2022) 'Environment and Other Legislation Amendment (Removing Nuclear Energy Prohibitions) Bill 2022', Second Reading Speech, Wednesday, 28 September 2022

CSIRO/AEMO 2023 *'GenCost: 2022-23 Consultation Draft' December 2022.* file:///C:/Users/JP/Downloads/EP2022-5511%20(2).pdf

Don't Nuke the Climate Australia, 2020, 'Environment Laws & uranium mining' (Flyer Environment Protection and Biodiversity Conservation Act 1999 Review (EPBC) draft report) https://dont-nuke-the-climate.org.au/wp-content/uploads/2020/07/flyer-EPBC-draft-report.pdf

Everingham, Sara (2018), *'Rum Jungle uranium mine rehabilitation jeopardised by NT Resources Department, traditional owners warn'* Tue 3 Apr 2018, ABC News Online.https://www.abc.net.au/news/2018-04-03/uranium-mine-rehabilitation-jeopardised-nt-resources-department/9612056

Green, Jim and Nuclear Monitor, 2014, New Mexico nuclear waste accident a 'horrific comedy of errors' that exposes deeper problems, The Ecologist, 27 November 2014. https://theecologist.org/2014/nov/27/new-mexico-nuclear-waste-accident-horrific-comedy-errors-exposes-deeper-problems

Green, Jim 2014, 'Nuclear power and biodiversity - don't forget WMD proliferation!', The Ecologist, 18 December 2014. https://theecologist.org/2014/dec/18/nuclear-power-and-biodiversity-dont-forget-wmd-proliferation

Gooch, Declan 2021 'Barngarla Traditional Owners prepare to challenge plan for Napandee nuclear waste facility'. ABC News (Online), 7 Dec 2021. Available at: https://www.abc.net.au/news/2021-12-07/napandee-nuclear-waste-dump-to-be-challenged-by-barngarlapeople/100680150

Gorvett, Zaria, 2022 '*The lost nuclear bombs that no one can find',* THE LOST INDEX, 5th August 2022, BBC Future https://www.bbc.com/future/article/20220804-the-lost-nuclear-bombs-that-no-one-can-find

Independent and Peaceful Australia Network (IPAN) (2022), "*CHARTING OUR OWN COURSE Questioning Australia's Involvement in US-led Wars and the Australia– United States alliance. A People's Inquiry.* file:///C:/Users/JP/Downloads/report.pdf

International Atomic Energy Agency's (IAEA) 2022, *'Energy, Electricity and Nuclear Power Estimates for the Period up to 2050, 2022 Edition'* https://www.iaea.org/publications/15268/energy-electricity-and-nuclear-power-estimates-for-the-period-up-to-2050

International Renewable Energy Agency (Irena), 2019, '*Renewable Power Generation Costs in 2019' R*eport, cited in Zubrinich, Paul, 2020, 'Solar costs have fallen 82% since 2010', June 4, 2020

https://www.pv-magazine-australia.com/2020/06/04/solar-costs-have-fallen-82-since-2010/

Jack, Simon (2022) *'Hinkley Point C nuclear plant to run £2.9bn over budget',* BBC News, 25 September 2019. https://www.bbc.co.uk/news/business-49823307

Jaschek, Christoph 2021, Human Rights & Nuclear Disarmament, 1 Jan 2021, published in Youth Fusion https://www.youth-fusion.org/articles/human-rights-nuclear-disarmament/

Lazard Asset Investment 2021, Levelized Cost of Energy, Levelized Cost of Storage, and Levelized Cost of Hydrogen, OCT 28 2021.
https://www.lazard.com/perspective/levelized-cost-of-energy-levelized-cost-of-storage-and-levelized-cost-of-hydrogen/
Lowy Institute 2022, 2022 Poll
https://poll.lowyinstitute.org/charts/potential-federal-government-policies-on-climate-change

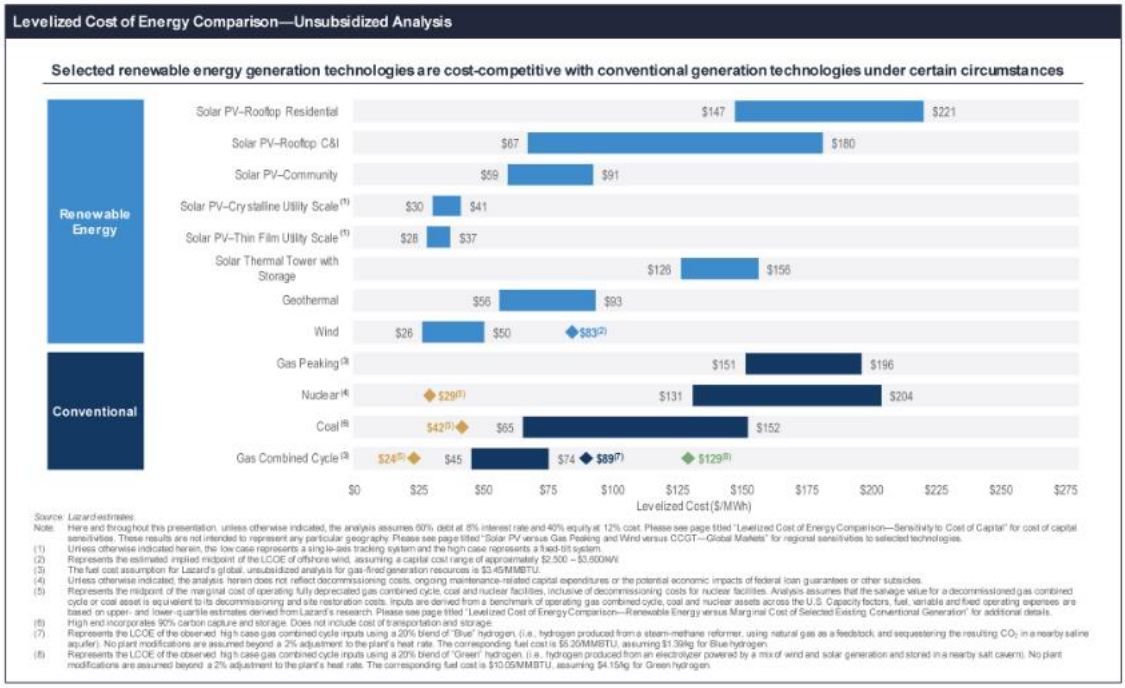
Senate ECITA Committee (2003), *'Regulating the Ranger, Jabiluka, Beverley and Honeymoon uranium mines, October 2003'* p. iv.
file:///C:/Users/JP/Downloads/report%20(2).pdf

Toke, David, 2022 '*The projected cost of new nuclear power has risen by fourfold since 2008 – and it is still rising'*
https://100percentrenewableuk.org/projected-cost-of-new-nuclear-power-has-risen-has-risen-by-fourfold-since-2008-and-it-is-still-rising

**Appendix**
**Excerpt from Lazard Report 2021**

## Levelized Cost of Energy

Lazard's latest annual Levelized Cost of Energy Analysis (LCOE 15.0) shows the continued cost-competitiveness of certain renewable energy technologies on a subsidized basis and the marginal cost of coal, nuclear and combined cycle gas generation. The costs of renewable energy technologies continue to decline globally, albeit at a slowing pace, reflecting reductions in capital costs, increased competition as the sector continues to mature and continued improvements in scale and technology.




[i] *Nuclear material subject to the provisions of an Australian nuclear cooperation agreement is known as AONM. The obligations of Australia's agreements apply to uranium as it moves through the different stages of the nuclear fuel cycle, and to nuclear material generated through the use of that uranium.* Source:: https://www.bing.com/search?q=Australian+obligated+uraniaum+&qs=n&form=QBRE&sp=-1&pq=australian+obligated+uraniaum+&sc=0-30&sk=&cvid=530C22F5408547FE8A58C0EA38142643&ghsh=0&ghacc=0&ghpl=