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Senate Standing Committees on Environment and Communications  
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Parliament House  
Canberra ACT 2600

## **Submission against Environment and Other Legislation Amendment (Removing Nuclear Energy Prohibitions) Bill 2022**

### **Introduction**

This submission is on behalf of the Top End Peace Alliance (TEPA). Members and supporters of TEPA are individuals and indigenous, faith, union, peace and environmental groups in the Top End of the Northern Territory. TEPA pays respect to Indigenous custodians of Country - past, present and future – and recognises that Indigenous peoples in Australia hold a continuous bond with Country that cannot be broken and has never been ceded.

Peaceful people in the Northern Territory are concerned for the health, safety and well-being of our children and grandchildren and the natural, living environment we all depend on into the future. We are all deeply concerned at the increasing militarisation of the NT by foreign powers intent on making war with nations not meeting US ideals of democratic or law-abiding decision-making. We love and protect our unique living environment and would like it to stay nuclear-free.

When governments are more prepared to spend billions – if not trillions – of public dollars on non-renewable, dirty fossil (including nuclear) energy and war industries - instead of on sustainable social and environmental needs - we are rushing life on Earth to extinction.

Senator Matt Canavan is recommending that certain sections of the Environmental Protection and Biodiversity (EPBC) Act 1999 as well sections of the Australian Radiation Protection and Nuclear Safety (ARPANS) Act 1998 be repealed to allow for ‘clean’ nuclear power to be processed and reprocessed in Australia.

Nuclear power proponents say that establishing nuclear power is as simple as removing s140a from the EPBC Act and s.10(b) prohibitions for nuclear power in the Commonwealth ARPANS Act. There are also state legislations in New South Wales, Queensland, WA and Victoria to consider.

Obviously, the process is far from simple.

Throughout most Australian jurisdictions from the 1960s on, there have been several debates and inquiries into whether nuclear power should be allowed in Australia. The resounding response has been that a nuclear power industry is not economically, environmentally or socially sustainable in Australia.

In Senator Canavan’s speech to the Bill, he states that nuclear power plants have zero emissions and that nuclear power is clean and safe.

The problem with this is when nuclear power plants meltdown, radioactive emissions and waste that last for thousands of years are released and that when nuclear bombs are ‘tested’ they release radioactive fallout that kills significant numbers of innocent people and also lasts for countless years.

### **Indigenous Country and UK Nuclear bomb tests (<https://nuclear.australianmap.net/>)**

There were three nuclear bomb tests carried out by Britain in the Monte Bello Islands off the coast of north West Australia – one in 1952 and two in 1956. The last plutonium bomb was 60 kilotons. It showered radioactive rain as far as the Queensland coast.

At Emu Fields -250 ks from Wallatina and slightly further from Coober Pedy – after the first nuclear bomb test in 1953, brought ‘Black Mist’ fallout and radiation sickness to communities along the track – due to high and unpredictable wind conditions. The existence of people was ignored because the firing criteria for the bomb test was favourable.

Seven nuclear weapons’ tests were carried out at Maralinga by the British military in 1956-57 as well as several ‘minor trials’ that left extensive radioactive fallout and crater damage. Indigenous peoples were moved from their traditional land and many others were ignored and were caught up in the fallout.

A Royal Commission was set up in 1983 to gauge the extent of damage from these and other tests on Aboriginal and Torres Strait Islander (ATSI) Country.

The Commission found that ‘The presence of Aborigines on the mainland near Monte Bello Islands and their extra vulnerability to the effect of fallout was not recognised by either [Atomic Weapons Research Establishment – UK] or the Safety Committee. It was a major oversight that the question of acceptable dose levels for Aborigines was recognised as a problem at Maralinga but was ignored in setting the fallout criteria for the Mosaic tests’ [on the Monte Bello islands].

The Emu Fields Totem bombs were of far less kilotons than the Maralinga and Monte Bello bombs but they produced an unacceptable level of fallout making ‘sickness’ Country and even blinding people along their range. The Commission considered their administration as a failure to consider the traditional lifestyles of community people that made them far more vulnerable to such tests.

The Commission found also that ‘ignorance, incompetence and cynicism’ predominated when Aboriginal people were ignored and their land was utilised as ‘uninhabited’.

A nuclear engineer involved in the Maralinga ‘clean-up’ in 2002 became a whistleblower who said, ‘What was done at Maralinga was a cheap and nasty solution that wouldn’t be adopted on white-fellas land’.

### **Historical nuclear disasters in Australia**

Australia has had a few scares in the past to wake us up to the powerful reality of how important it is to stay clear of processing uranium and playing with nuclear reaction on our shores.

TEPA is indebted to the Mineral Policy Institute, for much of the research we’ve used on this vital issue: [http://www.mpi.org.au/wp-content/uploads/2021/06/Joint\\_Sub\\_EPBC\\_Nukes\\_FINAL.pdf](http://www.mpi.org.au/wp-content/uploads/2021/06/Joint_Sub_EPBC_Nukes_FINAL.pdf)

Hunters Hill was a uranium processing facility in NSW courtesy of our colonial ties with Britain and lack of domestic legislations and regulatory bodies to ensure social and environmental safety. The site was abandoned in 1915 but as residential land it was valuable. Houses were built around the site up until the 1970s when people were made aware of the risk of radiation exposure. Houses were bought and demolished by the Federal government without site remediation taking place:

<https://www.abc.net.au/news/2021-04-30/hunters-hill-radioactive-waste-to-be-removed-sent-to-us/100106174>.

In 2008 a government inquiry revealed details of the site. After decades of delay and denial the government agreed to a remediation process in 2011 – original plans to move the material to a waste facility at Kemps Creek were abandoned after a community backlash. In 2019 a proposal to encapsulate and store the material on site was also rejected by the local council and residents. [NSW Legislative Council – 2008 - Report 28 - General Purpose Standing Committee No. 5 The former uranium smelter site at Hunter's Hill Ordered to be printed 30 September 2008 according to Standing Order 231]

<https://www.smh.com.au/national/nsw/kemps-creek-not-getting-contaminated-hunters-hill-soil-20140222-338of.html>

<https://www.abc.net.au/news/2019-07-24/hunters-hill-radioactive-waste-plan-rejected/11339572>

Finally, things are changing and the Australian nuclear Science and Technology Organisation (ANSTO) is carrying out remediation and radioactive waste will be removed to the USA:

<https://www.abc.net.au/news/2021-04-30/hunters-hill-radioactive-waste-to-be-removed-sent-to-us/100106174>

Port Pirie was opened as a purpose-built processing facility for uranium ore in 1955. Sale of the processed uranium was under contract to the US-UK Combined Development Agency to produce nuclear weapons for the Manhattan Project

[https://en.wikipedia.org/wiki/Combined\\_Development\\_Agency](https://en.wikipedia.org/wiki/Combined_Development_Agency)

The site now holds approximately 200,000 tonnes of tailings over 26 hectares. The dams are within 300 metres of homes, there was a lack of fencing for many years making the site accessible to children who would play at the site. The tailings walls failed in 1981 during high tides. Stop Gap measures were taken to cap tailings and increase the wall height, build fences and develop a trench and evaporation pond to collect run off – at a cost of \$1 million. In 2016 the SA Government released an environmental management plan for the site identifying climate change as a significant risk to the existing structures and groundwater levels that could compromise any containment at the site. [SA Department of State Development 2016 Port Pirie – Former Uranium & Rare Earth Treatment Plan –Radiation And Environment Management Plan]. See also

<http://nuclearrc.sa.gov.au/app/uploads/2016/02/Report-from-DSD-Radium-Hill-and-Port-Pirie.pdf>  
(lessons learned from historical uranium extraction, milling and processing in SA).

These are two of the many historical Australian nuclear disasters from small, limited nuclear processing.

### **Nuclear Reactor fallout overseas**

The ten most serious reactor meltdowns from 1957 to 2011 caused countless human deaths and still result in environmental devastation for hundreds of kilometres around the original reactor sites:

<https://www.processindustryforum.com/hot-topics/nuclear-disasters>

The most notable have been Chernobyl, Ukraine 1986 and Fukushima Japan 2011:

A radiation biologist and former member of the UK Government Committee Examining the Radiation Risks of Internal Emitters, summarised the worst impacts of the Chernobyl disaster in a 2016 scientific report:

- 40,000 fatal cancers are predicted in Europe over the next 50 years
- 6,000 thyroid cancer cases to date, 16,000 more expected
- 5 million people in Belarus, Ukraine and Russia still live in highly contaminated areas (>40 kBq/sq.m)

- 400 million in less contaminated areas (>4 kBq/sq.m)
- 37% of Chernobyl's fallout was deposited on western Europe;
- 42% of western Europe's land area was contaminated
- increased radiogenic thyroid cancers expected in West European countries
- increased radiogenic leukemias, cardiovascular diseases, breast cancers confirmed
- new evidence of radiogenic birth defects, mental health effects and diabetes and children living in contaminated areas suffering radiogenic illnesses.

[https://www.global2000.at/sites/global/files/GLOBAL\\_TORCH%202016\\_rz\\_WEB\\_KORR.pdf](https://www.global2000.at/sites/global/files/GLOBAL_TORCH%202016_rz_WEB_KORR.pdf)

The impacts of the Fukushima disaster were summarised in a 2015 study as:

- About 60 people died immediately during the actual evacuations in Fukushima Prefecture in March 2011.
- Between 2011 and 2015, an additional 1,867 people in Fukushima Prefecture died as a result of the evacuations following the nuclear disaster. These deaths were from ill health and suicides.
- It can be reliably estimated (using a fatal cancer risk factor of 10% per Sv) that about 5,000 fatal cancers will occur in Japan in the future from Fukushima's fallout.

<https://www.ianfairlie.org/wp-content/uploads/2015/08/Summing-up-the-Effects-of-the-Fukushima-Nuclear-Disaster-10.pdf>

In September 2011 following the multiple nuclear reactor meltdowns at Fukushima, the UN Secretary-General called on Australia to conduct 'an in-depth assessment of the net cost impact of the impacts of mining fissionable material on local communities and ecosystems:

<https://www.theguardian.com/commentisfree/2016/mar/11/fukushima-five-years-on-and-the-lessons-we-failed-to-learn>

A month later the director-general of the Australian Safeguards and Non-Proliferation Office of the Department of Foreign Affairs and Trade confirmed 'that Australian obligated nuclear material was at the Fukushima Daiichi site and in each of the reactors':

<https://independentaustralia.net/politics/politics-display/on-shaky-ground-australian-uranium-and-fukushima,9778>

The latest initiative from the Japanese government is to release contaminated ('treated') water from the Fukushima nuclear accident into the ocean against the recommendations of neighbouring and Pacific nation governments and scientists:

<https://www.theguardian.com/environment/2023/jan/13/fukushima-water-to-be-released-into-ocean-in-next-few-months-says-japan>

Nuclear power is also used to propel world-shattering nuclear weapons on military nuclear submarines that get lost and refound in highly explosive ways:

<https://www.bbc.com/future/article/20220804-the-lost-nuclear-bombs-that-no-one-can-find>

### **Why Nuclear Power is not necessary for Australia**

1. The s140A prohibition in the EPBC Act is consistent with other prohibitions in the Australian Radiation Protection and Nuclear Safety (ARPANS) Act and similar prohibitions in state legislation in New South Wales, Victoria and Queensland.

Legislation in Western Australia and South Australia prohibits nuclear waste storage facilities, which would be a necessity if nuclear power reactors were developed.

2. These legislative prohibitions demonstrate the broad community concern over and rejection of nuclear power and nuclear waste storage in Australia.
3. Contemporary safety issues have been exposed including the multiple reactor meltdowns, fires and explosions at the Fukushima Daiichi nuclear power site.
4. There is still no permanent nuclear waste disposal facility operating anywhere in the world for high-level nuclear waste generated by nuclear power reactors.
5. There are still dangerous links between the civilian nuclear fuel cycle and weapons proliferation, and the safeguards system remains limited and underfunded.
6. The risk of reactors becoming military targets (as has been the case with research reactors in the Middle East on multiple occasions) remains a serious concern.
7. Disturbing patterns of inadequate regulation are still in numerous countries. This continues despite the fact that inadequate regulation is widely accepted as a main cause of the Fukushima disaster.
8. Removing prohibitions to nuclear power would then require significant reforms across a range of existing legislation that is not designed to deal with nuclear power. This would require a massive increase in government resources as well as recruiting an appropriately skilled and capable workforce:  
<https://www.aph.gov.au/DocumentStore.ashx?id=bd453ef0-e584-45a0-a763-1c1d5f80f976&subId=669835>
9. When we divert resources into nuclear power, we lose essential resources to help us mitigate human-induced climate change, to secure a national renewable energy policy and to deliver modern environmental protection legislation.

ARPANSA identifies significant barriers to establishing a regulatory system to deal with nuclear power. Australia would need:

- A review of the legal framework for radiation and nuclear safety across all the jurisdictions,
- A single piece of national overriding legislation
- A national properly resourced government agency that deals with radiation and nuclear safety
- To recruit a workforce with the necessary capabilities
- to establish a long-term education and training program
- to changes the National Radioactive Waste Management Act
- to address the high level of public concern over transporting far more radioactive material across Country
- A review of emergency preparedness and response frameworks - to strengthen and resource them while providing clear and defined roles in emergency response between the different jurisdictions and ARPANSA;
- A review of relevant international conventions and Australia's obligations to be endorsed into domestic legislation

We would also need to:

- Secure sites for nuclear facilities,
- Provide safe transport of nuclear materials,
- Adequately manage and store nuclear waste,
- Safely decommission reactors,
- Consult fairly, openly and accountably with communities
- Arrange massive insurance agreements,
- Assess weapons' proliferation risks and perceptions,
- Provide occupational health and safety,
- Allocate water,
- Connect infrastructure to the grid,
- Ensure jurisdictional arrangements between the Commonwealth and states/territories, and
- more.

### **Conclusion**

Section 140A of the EPBC Act 1999 states "No approval for certain nuclear installations: The Minister must not approve an action consisting of or involving the construction or operation of any of the following nuclear installations: (a) a nuclear fuel fabrication plant; (b) a nuclear power plant; (c) an enrichment plant; (d) a reprocessing facility." **This should be retained.**

As advised by the UN Secretary General following the Fukushima nuclear disaster because Australian uranium was present in each of the Fukushima Daiichi reactors at the time of multiple reactor meltdowns, **there should be an inquiry into the human and environmental impacts of uranium mining.**

There is a cultural bond to Country that means ATSI community people are part of the land. They protect each other. There is a truly circular economy. We can't keep destroying Country for linear profit and we need to accept that climate-change and unsustainable energy wasting are linked. Future generations won't thank us for our greed.

Uranium mining and processing is highly dangerous and pollutive and nuclear reactors tend to react for thousands of years when climate catastrophes disturb them. **Remember that uranium is a finite resource but infinitely dangerous. It should be kept in the ground.**

Renewable energy enjoys broad public support and is significantly cheaper, safer and cleaner than nuclear energy. Wind, solar and tidal energy has far less legislative implications or requirements for emergency preparedness and radiation safety. **Australia should invest more money and resources into sustainable renewable energy.**

Senator Canavan vows that if key sections of the Nuclear Prohibition and EPBC Acts are deleted, this will not take away Ministerial power to protect people and the environment. **Will the good senator and his supporting senators be prepared to put their jobs and lives at stake to ensure this?**

With Respect,

Diana

***Diana Rickard***  
***Peace Educator***  
***Top End Peace Alliance***