

## 2022 Senate Inquiry into Nuclear Power

There are many reasons why nuclear power is unlawful in Australia. Most are not new, and just as relevant as they always have been.

I do understand that the current push by the nuclear industry of Small Modular Reactors sounds appealing. Distributed 'baseload' power with a number of reactors producing no greenhouse gas emissions (unlike coal and gas). However, digging only slightly below the surface reveals insurmountable problems and dangers.

1. Nuclear Waste is quite frankly the elephant in the room. It is building up all over the world, a burden for future generations who have not had a say or benefited from its production. This itself is a major ethical issue. The intermediate level waste currently intended to be imposed against the South Australian law on a small and now divided farming community (Kimba) must be kept safe from people and the environment for a minimum of 10,000 years. Some radionuclides present in high level waste from nuclear power plants require containment for over 100,000 years. This needs to be acknowledged. It is constantly downplayed by the nuclear industry. (Any plan for a reactor build must have this 'back end' cost factored in). I would like to make a brief comment on the way the current plan for Australia's relatively small amount of radioactive waste has played out since any proposed SMR waste would likely end up at the planned NRWFM at Kimba. The process has been manipulative and divisive (to put it politely). It has involved deliberate lies and bribery. It has deliberately trampled on the rights of First Nations people. A proper process to honestly and respectfully address the waste issue would be a pre-requisite for the consideration of nuclear power in Australia.
2. SMRs require at least 7 years to build (effectively stalling action on climate change) and require large taxpayer subsidies, whereas renewables can be up and running in 6 months. Furthermore, they have not been tried and tested in the US.
3. As much as denial is attempted by some, there is an inextricable link between domestic nuclear energy production and the production of plutonium for nuclear weapons. This is a long and deep subject, but this short summary is correct. Australia has its own history on this, which will be familiar to some on this committee.
4. The mining and processing of the uranium required to fuel the nuclear reactors produces radioactive tailings and presents a radioactivity hazard to the miners. Workers in nuclear power plants also experience radioactive risks, especially those involved in loading the fuel and handling the 'spent' fuel, which sits in cooling ponds for 7 years and is itself (along with the reactor) a potential radioactive threat (loss of electricity necessary for the cooling ponds results in uncontrolled atmospheric radioactive release, a real threat in the invasion of Ukraine).

These and other important reasons are why nuclear power should remain prohibited in Australia. The reasons for its current prohibition have not gone away, they have grown stronger.