

Why nuclear power will **never be right** for Australia



**AUSTRALIAN
CONSERVATION
FOUNDATION**

**Nature
needs us,
now**

Every previous nuclear push has failed to deliver and the current proposal is looking no different.

The exaggerated claims being made by the latest round of nuclear promoters do not alter the evidence which clearly shows nuclear is the worst option for Australia.

The Coalition's nuclear plans and claims are not just fanciful, they're irresponsible.

Nuclear is a costly distraction from effective climate action. It risks delaying - and even derailing - the sensible, considered and speedy transition to renewables that is already well underway and is essential to protect the environment and safeguard our future way of life.

The reality is, if you're promoting nuclear, [you are perpetuating fossil fuels.](#)



Nuclear is not viable for Australia's energy future because:

1



Producing nuclear energy would simply take too long

On average, it takes about nine years to build a nuclear power station and another 10 years for planning and licensing. Effectively that means two decades between first idea and first power.



It is also [illegal in every state and territory to build nuclear reactors](#). It would take several years to overturn the two sets of federal legislation and state-based laws that are currently in place before construction even began. Nuclear does not enjoy community or bi-partisan political support and has scant social license.

This means there's no chance a nuclear power station could be built in Australia before 2040. We simply do not have this time to wait, or to waste.

“It would take at least 20 years.”

Former Australian Energy Infrastructure Commissioner Andrew Dyer on a domestic nuclear timeframe

2

Nuclear is dirty and dangerous

Nuclear power stations pose significant community, environment and health risks.

Apart from the radioactive waste they generate, nuclear power stations run on uranium which, like coal and gas, is not a renewable resource.

Approximately one third of the world's uranium resources are found in Australia. Mining these radioactive rocks pollutes our air, soil and water and can damage the genetic and reproductive systems of plants, animals and people.

It is also often mined against the wishes and at the expense of Traditional Owners and their Country.



All of Australia's operating uranium mines have a history of leaks, spills and accidents—and none has ever been properly rehabilitated.

Let's not forget, radiation from major nuclear disasters, such as Chernobyl in 1986 and Fukushima in 2011, has impacted hundreds of thousands of people and contaminated large areas until the present day.

The Fukushima disaster was directly fuelled by Australian uranium.

Following the Fukushima disaster, large volumes of contaminated water have been collected and stored on site. This includes water used to cool nuclear fuel rods along with groundwater, rainwater and seepage water - all containing elevated levels of contaminants.

Between 100 and 300 tonnes of water are collected each day and there are more than one thousand large tanks holding around 1.3 million tonnes of contaminated water on site. Direct dumping of this wastewater into the Pacific Ocean began last year. This has been strongly opposed by many regional countries and communities due to the adverse environmental and cultural impacts.

3

Nuclear is costly

Nuclear energy is far more expensive in all metrics compared to renewable options.

[Modelling shows developing nuclear infrastructure is 5-10 times more expensive than solar and wind.](#)

And even if the technology was in place, it would also cost more to produce. [A joint study by the CSIRO and Australian Energy Market Operator \(AEMO\)](#) found solar and wind energy generation would cost between \$60 and \$100 per megawatt hour by 2030, while that from any future small modular reactor would cost between \$200 and \$350 per megawatt hour.

Nuclear is also an energy source that the market doesn't want. The large electricity utilities are not interested, nor are most private investors. This means nuclear would require massive public subsidies and big government intervention. The Coalition's plans do not acknowledge these costs or the cost of overall energy production or long-term radioactive waste management. Investing in nuclear energy when there is limited infrastructure, skills base or regulatory framework in place would

be massively expensive. As would the social and environmental costs of keeping coal-fired power stations open waiting for nuclear power to come online.

[75% of Australians understand that wind or solar are the quickest way to drop power bills.](#)

Promotion of nuclear delays this effort at a time when household costs are hitting Australians hard.



“When it comes to averting the imminent effect of climate change, even the cutting edge of nuclear technology will prove to be too little too late.” Former US Nuclear Regulatory Commission chair Allison Macfarlane

4

Nuclear power needs a lot of water

Nuclear energy is an extremely thirsty industry.

Nuclear reactors use tonnes of water per second to cool the reactors to produce electricity. This is unlike wind and solar which require little or no ongoing water use.

If nuclear power stations are to be placed in areas at previous coal fired powered station sites, as proposed by the Coalition, demands on this resource would need to be considered in relation to other local industries and water users.

For example, NSW's Hunter Valley has a large agricultural sector and thoroughbred horse industry which depends on this finite resource. Nuclear power stations would be competing for these precious resources and this would have adverse environmental and economic impacts.



5



We have no proven options for managing long-lived radioactive waste



Radioactive waste is often described as the Achilles Heel of the nuclear industry.

All reactors create waste, and this is a growing and unresolved global management issue.

Australia's history with radioactive waste over the past thirty years has been divisive, contested and ultimately unproductive.

For decades successive governments have tried to impose low and intermediate level waste dumps and stores - predominantly on First Nations lands - across multiple sites in Australia.

Every dump plan has been stopped by community, political and legal opposition. Australia's current intermediate level waste needs to be isolated from people and the environment for up to 10,000 years. High-level radioactive waste from commercial reactors must be isolated for up to 100,000 years.

A nuclear fuel rod produces around three years of electricity before it becomes unpredictable and ultimately becomes high-level waste. This means you get about 1000 days of electricity at the cost of 100,000 years of toxic waste.

This is a massive intergenerational burden for communities where waste is stored and for all future generations.

The rewards are utterly eclipsed by the risks and put simply, long-term radioactive waste management is not clean, proven or cheap.

6



We have better alternatives that are renewable and ready

If our choices were only between coal or nuclear we would face a tough choice, but fortunately Australia is blessed with multiple energy options.

There are far more proven and preferable alternatives to nuclear, which is why Australia hasn't developed nuclear power stations.

Previously, we didn't embrace nuclear power when other nations did due to an abundance of coal.

We now know both that coal fuels climate chaos and that we need to retire 80% of coal from the National Electricity Market in the next decade.

This huge challenge is not helped by deliberate delay or manufactured confusion. Our energy future is clear, we need to embrace renewables.

Renewables are cheaper, cleaner and faster. They're more deployable, popular and most importantly, they actually exist and are producing power in Australia today, and everyday.



[Recent polls show:](#)

- Over 70% of Australians support the continuing energy transition to renewables rather than developing nuclear energy or continuing with coal.
- 76% would prefer to live near a renewable energy facility, like a wind or solar farm, rather than a nuclear reactor or coal mine.

Renewables are the fastest growing electricity sector in the world. Between 2022 and 2027, renewables will be responsible for over 90% of [global electricity capacity expansion](#).

The Opposition's nuclear plans are based on the development of small modular reactors (SMRs) which are not in commercial deployment anywhere in the world. **Not one hot shower or cold drink has resulted from SMRs. When it comes to energy, we need evidence and outcomes, not promises and wishful thinking.**

Increasingly the Coalition is aware that SMR's are neither real nor credible so now they are talking more about larger reactors. The international experience of large reactors is one of large delays, large costs and large risks.

We need to embrace the fastest growing national and global energy sector and become a leader in clean energy thinking and technology.

Renewable energy is clean, safe, affordable, low risk, and popular.

Nuclear energy is risky, slow and wildly expensive.

Our shared energy future is renewable, not radioactive.

Nature needs us, now

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