

Submission from the Darling Downs Environmental Council on the Federal Nuclear Inquiry

The Darling Downs Environmental Council (DDEC) appreciates the chance to contribute to the House Select Committee on Nuclear Energy's inquiry into nuclear power generation in Australia. Darling Downs Environment Council represents a number of smaller environmental organisations in southern Queensland and has done so for 15 years.

Queensland's unique ecosystems and communities are already facing the effects of climate change. To provide the Great Barrier Reef a chance of survival, we must significantly reduce emissions by 2035 to align with a 1.5-degree Celsius future. Currently, emissions from energy and electricity production are Queensland's largest source of greenhouse gases, making them the top priority for reduction. A well-planned shift to renewable energy can achieve these reductions while benefiting both nature and communities. Nuclear energy cannot play a role in this transition within the necessary timeframe.

We have significant concerns regarding nuclear energy, including:

1. **High Water Usage:** In a state already facing drought conditions, nuclear power requires substantial water, especially in emergencies.
2. **Long-Term Waste Management:** The challenge of safely managing nuclear waste for thousands of years is unresolved.
3. **Opposition from First Nations:** Many Indigenous communities oppose nuclear development on their ancestral lands.
4. **Costs and Compatibility:** Nuclear energy is expensive and incompatible with the high-renewable systems we need to develop over the next decade to cut emissions.

Queensland is on track to achieve 80% renewable energy by 2035, which would significantly contribute to a pathway aligned with a 1.5-degree emissions reduction. By prioritizing effective renewable energy development, we can ensure reliable, affordable electricity while preserving Queensland's precious environment for future generations.

Key Concerns about Nuclear Power Generation in Queensland

1. **Deployment Timelines and Climate Imperative:** Nuclear power cannot be deployed quickly in Queensland. Global reviews show that the average time from construction start to grid connection for nuclear plants is about 7.7 years, often longer for new technologies or regions with multiple regulators. For example, the UAE began developing its nuclear industry in 2006 and only completed its first plant in 2024—a journey of 18 years. Hinkley Point C in the UK has also faced significant delays, with operations now expected to begin in 2029—16 years after the initial contract was signed. Given these timelines, a 15-20 year window for nuclear power in Queensland seems overly optimistic, pushing availability to 2040-2045 at the earliest. To meet our 1.5-degree carbon budget, we need to cut emissions by at least 60% by 2030, and waiting for nuclear power would jeopardize this goal.
2. **Waste Storage Issues:** Nuclear energy produces radioactive waste that remains hazardous for tens of thousands of years, and no country has successfully implemented a permanent disposal solution. Australia currently manages a small amount of nuclear waste from medical facilities, but increased production from nuclear energy would outstrip our storage capabilities. Past proposals for nuclear waste sites, such as at Muckaty Station and Kimba, faced strong local opposition and were ultimately abandoned. Moving radioactive materials poses additional risks of accidents during transport.

3. **Electricity System Impact:** Nuclear energy is prohibitively expensive, with costs estimated between \$200 and \$350 per megawatt-hour compared to \$30 to \$70 for renewables. As Queensland's renewable energy sector continues to drive down prices, nuclear power adds unnecessary risks and delays. Furthermore, integrating nuclear into Queensland's energy mix would force the shutdown of thousands of existing solar systems, undermining investment in clean energy.

4. **Water Use Concerns:** Nuclear facilities require large quantities of water for cooling, a critical issue in drought-prone Queensland. Current coal-fired plants already use significant amounts of water, and nuclear plants would likely exacerbate this issue, competing with agricultural needs. Past droughts have already forced reductions in coal plant operations due to water scarcity.

5. **Legal Framework Issues:** Nuclear power is currently prohibited in Queensland by both federal and state laws, necessitating a plebiscite for any developments. This adds significant costs and delays to potential nuclear projects, which could be better spent improving frameworks for renewable energy.

6. **Local Community Risks:** There is little local support for nuclear energy in Queensland, with many residents preferring wind or solar farms. Nuclear facilities also pose safety risks, especially in a region vulnerable to natural disasters. The geographic vulnerabilities of Queensland heighten concerns about managing potential nuclear incidents, particularly for nearby communities. First Nations groups have consistently opposed nuclear developments due to historical injustices. DDEC particularly opposes the development of a nuclear power plant at Tarong. The construction and operation of a nuclear facility would most likely disrupt local ecosystems and wildlife habitats. The area surrounding Tarong is home to diverse flora and fauna, including threatened species such as the Koala, the Greater Glider and the Powerful Owl. The water demands for a nuclear power plant at Tarong would also add significant pressure to the Boondoomba Dam and Boyne river water schemes which supply critical irrigation to several farms in the area. Historically, the area has suffered several years of drought and therefore water insecurity. As per the Queensland government's Nuclear Power - Research Summary published in July 2024, nuclear power requires significantly more water than wind, solar and even coal-fired power plants, making such a energy source an unviable option for the area.

The Darling Downs Environment Council strongly opposes the development of nuclear power in Australia. Nuclear energy is too costly, too slow to implement, and presents substantial risks to both our environment and communities. We urge the committee to reject nuclear power as a viable energy solution and to focus on advancing Australia's renewable energy future, which offers quicker, more affordable, and safer alternatives while protecting our environment and way of life.