

# Nuclear Energy

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IS NUCLEAR ENERGY A VIABLE OPTION FOR ADDRESSING CLIMATE CHANGE IN AUSTRALIA?

*SEN made a submission to the 2024 Federal House Select Committee on Nuclear Energy and appeared as a witness when the inquiry visited Perth in Dec 2024.*



# Nuclear Energy - Facts

Nuclear power is the slowest to deploy, most expensive and riskiest type of energy generation. It is not a feasible solution [in Australia](#) to tackle climate change because:

- Australia has abundant solar and wind resources, RE have the capacity to supply near 100% of our rising electricity needs quickly
- Firming of RE needs technically and commercially flexible generation
- Large scale renewables requires large back-up – nuclear doesn't fit this back-up role
- Government owned nuclear power plant represents sovereign risk and curb private investment in the energy sector
- Nuclear power would increase electricity prices and reduce grid reliability
- Nuclear power is banned in Australia, we'd need to lift the ban and build the regulatory framework
- Nuclear reactors would take 12-15 years to plan, licence and build – action is needed now. Delays means increase emissions
- Nuclear power is substantially more expensive than firmed renewables
- **Small Modular Reactors** are unproven and would face the same social, regulatory and technical hurdles as large scale nuclear
- Nuclear power consumes large volumes of water, which is scarce in WA
- Nuclear reactors produce long-lived radioactive wastes, which no-one wants buried in their locality
- Nuclear power poses safety and security risks
- The total lifecycle costs are never fully recovered: e.g. nuclear waste; plant decommissioning and site remediation; cost of duplicate plant required for use during planned and unplanned outages.

Check out [this video](#) from [Engineering with Rosie](#) on nuclear power in Australia