

NUCLEAR POWER CAN'T SAVE THE CLIMATE

# DON'T NUKE the CLIMATE



**OPPOSITION LEADER PETER DUTTON'S NUCLEAR POWER "PLAN" IS DANGEROUS, RISKY, SLOW AND EXPENSIVE. HERE'S WHY.**

**DANGEROUS:** In addition to the danger of a nuclear reactor meltdown as the world witnessed at Fukushima, Chernobyl and Three Mile Island, less catastrophic reactor accidents happen on a regular basis. As reactors age, these risks only increase.

Even when reactors are functioning as designed, workers in nuclear power plants and surrounding residents are routinely exposed to low doses of ionising radiation, proven to increase the incidence of cancers, genetic mutations and other serious health conditions.

Nuclear power has also repeatedly been linked to nuclear weapons programs. Nuclear reactors not only become military targets but produce trace quantities of plutonium, providing the feedstock for nuclear weapons.

**RISKY:** Reactors produce high level radioactive waste in the form of spent nuclear fuel. No country has established a repository for high level nuclear waste from nuclear power. Australia's own battle to store low and intermediate level waste has been ongoing for 30 years and there is still no agreed solution in sight. To produce nuclear energy, uranium has to be mined, transported and enriched. This all uses fossil fuels.

**SLOW:** The industry does not have the capacity to rapidly expand production. In Australia, it would take at least a decade of planning before reactor construction could begin, then another decade to build a reactor: a minimum of 20 years before nuclear power could even begin to help reduce emissions. Globally nuclear reactors are notorious for being behind schedule and over budget - there is no reason to imagine the Australian experience will be any different.

**EXPENSIVE:** According to the World Nuclear Industry Status Report 2024 and CSIRO GenCost Report the cost of generating solar power ranges from \$36 to \$44 per megawatt hour (MWh), onshore wind power comes in at \$29 to \$56 per MWh. Nuclear energy costs between \$112 and \$189. The 2020 Lazards analysis found capital costs for nuclear power are higher than almost any other energy source.

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"...when it comes to averting the imminent effects of climate change, even the cutting edge of nuclear technology will prove to be too little, too late.

Put simply, given the economic trends in existing plants and those under construction, nuclear power cannot positively impact climate change in the next ten years or more."

Former US Nuclear Regulatory Commission Chairperson Allison MacFarlane, July 2021

### ISN'T NUCLEAR POWER BETTER THAN COAL?

Renewable power has doubled over the past decade and now accounts for 30% of global electricity generation while nuclear's contribution is 10% and continues to fall. Nuclear power plants are vulnerable to threats which are being exacerbated by climate change.

### WHAT ABOUT SMALL MODULAR REACTORS?

Of the small modular reactors (SMRs) under construction most are over-budget and behind schedule; there are also disturbing connections between weapons proliferation and militarism more generally; and about half of the SMRs under construction are intended to be used to facilitate the exploitation of fossil fuel reserves. And SMR's produce even more radioactive waste per KW/h of power than big scale reactors.

### HOW MUCH WATER DOES A NUCLEAR REACTOR USE?

A single nuclear power reactor operating for a single day typically consumes 36-65 million litres of water. The water requirements for a nuclear power station can vary between 20 to 83 per cent more than for thermal power stations.

### NUCLEAR ACCIDENTS ARE RARE, AREN'T THEY?

There have been over 200 nuclear power accidents and many more acts of nuclear theft, smuggling and deliberate attacks on nuclear reactors.

### DOESN'T NUCLEAR POWER HAVE ZERO EMISSIONS?

The nuclear power life cycle generates between 10-103 grams of CO<sub>2</sub> equivalent per kWh, which is far lower than fossil fuels - but as uranium ore grades decline emissions would increase to as much as 248 gCO<sub>2</sub>e/kWh. As well as emissions from mining and milling uranium ore there are emissions associated with the transport and processing of fuel.

### ISN'T NUCLEAR POWER CHEAPER?

Nuclear power is far more expensive than renewable energy sources. It costs 3-4 times as much as renewable alternatives.

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"In the time it would likely take to build one nuclear power station... the whole grid can be nearly completely decarbonised."

Giles Parkinson founder and editor of Renew Economy.

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A recent US Army War College report also states that nuclear power facilities are at high risk of temporary or permanent closure due to climate threats—with 60% of US nuclear capacity at risk from future sea-level rise, severe storms, and cooling water shortages."

Dr Paul Dorfman - Senior Research Associate at the University College London Energy Institute.

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"Nuclear power stations are not appropriate for Australia – and probably never will be. Nuclear power stations are highly controversial, can't be built under existing law in any Australian state or territory, are a more expensive source of power than renewable energy, and present significant challenges in terms of the storage and transport of nuclear waste, and use of water."

The Climate Council of Australia

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