

South Australia's Climate Change Strategy

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The South Australian government is currently conducting an enquiry into the nuclear fuel cycle. It is important to understand that nuclear energy is not a response to climate change. Please do not include nuclear power as part of South Australia's climate change strategy for reasons outlined below.

1. Subsidies represent an opportunity cost at the expense of more effective alternatives.

A major 2011 US report from the Union of Concerned Scientists "*Nuclear Power: Still Not Viable Without Subsidies*"¹ states:

"Conspicuously absent from industry press releases and briefing memos touting nuclear power's potential as a solution to global warming is any mention of the industry's long and expensive history of taxpayer subsidies and excessive charges to utility ratepayers. These subsidies not only enabled the nation's existing reactors to be built in the first place, but have also supported their operation for decades."

"The industry and its allies are now pressuring all levels of government for large new subsidies to support the construction and operation of a new generation of reactors and fuel-cycle facilities. The substantial political support the industry has attracted thus far rests largely on an uncritical acceptance of the industry's economic claims and an incomplete understanding of the subsidies that made—and continue to make—the existing nuclear fleet possible. Such blind acceptance is an unwarranted, expensive leap of faith that could set back more cost-effective efforts to combat climate change."

2. Simply comparing greenhouse gas emissions is misleading.

A simple comparison of lifecycle greenhouse gas emissions from nuclear power with those from other energy sources fails to capture some crucial consequences of nuclear power programs. These consequences include displacing renewable energy, discouraging energy efficiency and entrenching a high energy production and consumption system. Nuclear energy is a direct competitor to renewable energy and an enemy of energy efficiency.²

This means that even if life cycle greenhouse gas emissions from nuclear energy are relatively low, the energy system as a whole will generate much higher emissions than a low consumption system emphasising demand-side measures and designed to reward the provision of quality energy services rather than energy supply per se. This low consumption system is the type of system that we should be aiming for if we want to solve the problem of global warming. Any

¹ Doug Koplow, 2011, *Nuclear Power: Still Not Viable Without Subsidies*, Union of Concerned Scientists:

http://www.ucsusa.org/sites/default/files/legacy/assets/documents/nuclear_power/nuclear_subsidies_report.pdf

² Mark Cooper, 2015, *Power shift: The development of a 21st Century electricity sector and the nuclear war to stop it*:

http://www-assets.vermontlaw.edu/Assets/iee/Power_Shift_Mark_Cooper_June_2015.PDF

assessment of greenhouse gas emissions of nuclear energy must be viewed in the context of the energy system that supports it, and from that perspective, nuclear energy is a loser.

3. Nuclear power would be too slow.

A further decisive argument against nuclear energy as a solution to climate change is the time it takes from planning to start-up of nuclear power plants. By the time a nuclear power plant was constructed in South Australia it would be too late. By contrast, South Australia has renewable energy resources that can be exploited immediately with some technologies and relatively quickly with others.

4. The public doesn't support nuclear energy.

A 2012 nation-wide survey was performed in Australia following the disaster at the Fukushima Daiichi Nuclear Power Station in Japan, an event triggered by the 11 March 2011 Tohoku earthquake and tsunami. A majority of Australian respondents had an unfavourable attitude to nuclear power (50.1% unfavourable compared to 26.9% favourable) and most of those were *not* willing to accept nuclear power as an option, even if it helped tackle climate change. The most popular option was expanding the use of renewable energy sources (71%) followed by energy-efficient technologies (58%) and behavioural change (54%). The people who conducted the survey concluded, "*Opposition to nuclear power will continue to be an obstacle against its future development*".³ This conclusion is consistent with the results of a recent Advertiser survey which found that only 26% of South Australians would support a nuclear power station in the state.⁴ Strong opposition to nuclear power is long standing⁵ and these recent surveys demonstrate that there is no reason to assume that Australians are about to become favourable any time soon.

³ Deanne Bird et al, 2014, 'Nuclear power in Australia: A comparative analysis of public opinion regarding climate change and the Fukushima disaster', *Energy Policy*, Vol. 65, February, pp. 644–653:

<http://www.sciencedirect.com/science/article/pii/S0301421513009713>

⁴ Paul Starick, 2015, 'Voters reject Premier Jay Weatherill's agenda to transform the state', *The Advertiser*, March 13

⁵ Andrew MacIntosh and Clive Hamilton, 2007, 'Attitudes to nuclear power: Are they shifting?', Australia Institute, Research Paper No. 43, May