

Former anti-nuclear environmentalist gives resounding nod to nuclear power

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Nuclear energy has received the thumbs up from a former anti-nuclear environmentalist who co-authored an independent report pitting the advantages of nuclear energy against renewable energy for electricity generation.

Ben Heard told a uranium conference in Adelaide today that nuclear power presented lower start-up costs, lower cost electricity, much smaller land use, no use of fresh water, more reliable generation capacity and other advantages compared to renewable energy.

“If as a country, we continue to say ‘no’ to nuclear energy as a way of addressing climate change, we better damn well be sure we know why we are saying ‘no’,” he added.

Key takeaways include nuclear power requiring a capital cost of between \$3.5 billion and \$4.8 billion for a 690 megawatt equivalent plant compared to \$8.1 billion for a 1,460MWe equivalent combined renewable energy plant as well as requiring 2 square kilometres of exclusive land compared to 18.1 square kilometres for the renewable option.

The highly competitive costs takes into insurance, waste management and decommissioning costs.

Heard’s comprehensive, self-funded report (Zero Carbon Options – Seeking an Economic Mix for an Environmental Outcome) analyses 13 specific benchmarks to identify the most efficient energy source to replace two small coal-fired power stations at Port Augusta in South Australia.

“To my knowledge, nothing like this has ever been done before anywhere in the world,” he said.

“One of the advantages of this report is the fact it is based on an actual case study – powering the Port Augusta electricity stations – so can easily be used as a blueprint for similar plants utilised anywhere in the world.

“This report applied a multi-criteria analysis of the performance of different technology solutions against the specific task of reliability replacing the electricity provided by two small coal-fired power stations.

“If Australians are genuinely serious about addressing climate change including reducing greenhouse gas emissions – nuclear is by far the best way to go.”

The multi-criteria analysis used to compare nuclear energy against a hybrid renewable option (combining solar and wind) included capital cost, operational waste, land use, water consumption, job creation, lifespan of plant, reliability and existing global and national generating capacity.

Heard said the challenge of maintaining and building Australia’s economy while engaging in rapid decarbonisation was a daunting one.

“But to take the challenge without impartially exploring every available zero-carbon generation technology is unwise – and arguably, irresponsible,” he added.

“Our hope that this report will foster a more open and accountable decision of all the zero-carbon options that are currently available to us.”

Notably, the report argues that a mix of renewables and nuclear, deployed according to their respective advantages, will in fact balance out the higher average costs of renewables.

This would allow Australia to meet its critical dual goals of retaining its place in the global economy as an energy competitive trading nation as well as achieving deep and rapid cuts in greenhouse gas emissions.