

Ben Heard



As Director of ThinkClimate Consulting I have delivered and contributed to a number of major environmental initiatives in South Australia for government, private and not-for profit clients.

My appreciation of the climate crisis forced an evidence-based rethink of my long-held opposition to nuclear power. In early 2011 I delivered a presentation *Nuclear Power: From Opponent to Proponent* to a strong response. I have since become a prominent analyst and commentator on matters of nuclear technology. I have developed a high level of generalist knowledge of matters pertaining to nuclear technology including economics of nuclear power, nuclear fuel cycle developments, advanced reactor and recycling technologies, proliferation, and radiation. Environmental sustainability and climate change mitigation remains a central focus for the application of nuclear technology. I have developed an extensive national and international network of experts in various facets of nuclear technology.

I am now undertaking doctoral studies with the University of Adelaide examining pathways for the introduction of nuclear power, and in particular advanced nuclear energy systems, into Australia's electricity market. I have delivered units covering climate science, climate adaptation, energy assessment and global sustainability challenges through several units of the Master of Sustainability at the University of Adelaide.

Qualifications

Masters of Corporate Environmental Sustainability Management, Monash University, 2007

Bachelor of Applied Science, Occupational Therapy, University of South Australia, 2001

Current Positions:

Director – ThinkClimate Consulting

I am an independent consultant, analyst and service provider on matters of climate change, sustainability and energy.

PhD Candidate –University of Adelaide

Exploring the potential for nuclear technology to aid in the decarbonisation of Australia's energy systems, particularly through advanced nuclear technologies. I work under Professors Corey Bradshaw, Barry Brook and Tom Wigley.

Commentator– Decarbonise SA

Through the blog *Decarbonise SA* I have documented my iterative research relating to the potential for the inclusion of nuclear technology as a means to reduce greenhouse gas emissions.

Public Interest Panel- Department of Industry and Science

Assisting the Federal Department of Industry and Science with the siting of a national low level radioactive waste repository and interim store for intermediate level waste.

Advisory Panel Member- Energy for Humanity

I am a member of the advisory panel for Energy for Humanity, a UK-based not-for-profit promoting a future of plentiful clean energy through the deployment of advanced nuclear technologies in partnership with renewable technologies.

International Advisory Board, Environmental Subcommittee, Terrestrial Energy

Terrestrial Energy is a Canadian company with patented design for the Integral Molten Salt Reactor.

Publications

Heard, B., (lead researcher and author) (2015), 'Transforming our economy; Cleaning our energy; sustaining our future', submission to the South Australian Nuclear for Cycle Royal Commission, Office of Senator Sean Edwards, Liberal Senator for South Australia

Heard, B., Bradshaw, C & Brook, B 2015, 'Beyond wind: furthering development of clean energy in South Australia', Transactions of the Royal Society of South Australia, vol. 139, no. 1.

Heard, B. & Brook, B. (2014), 'Nuclear waste is safe to store in our suburbs, not just the bush', A Year in the Life of Australia, The Conversation

Heard, B. & Brook, B. (2011), '21st Century Nuclear' , *SA Mines and Energy Journal*, October 2011- October 2012 (a series of six articles)

Heard, B & Brown, J 2012, Zero Carbon Options: Seeking an economic mix for an environmental outcome, ThinkClimate Consulting, Adelaide, South Australia.

Bailey, H., Heard, B. and Morison, J. (2011), Developing the Carbon Neutral Investment Model for Local Government, Refereed Proceedings of the 35th Annual Conference of Australian and New Zealand Regional Science Association International

Publications for popular media have appeared in The Australian, Sydney Morning Herald, The Breakthrough Journal, The Conversation, On-line Opinion, ABC Environment Blog, Brave New Climate, OETEC (Argentina), New Matilda, Business Environment Network

Awards

Honourary Member, Leaders Institute of South Australia (2016)

'Top Reviewer 2015' for exceptional contribution through their reviews to the quality of papers in *Energy Research and Social Science*

Publication Medal 2015 for the Royal Society of South Australia

United Uranium Scholarship (2015), to present at the World Nuclear Symposium 2015

Best Oral Presentation, *Worlds Without Nuclear: A systematic review of 100 per cent renewable literature*, International Youth Nuclear Congress, Burgos, Spain, June 2014

Divisional scholarship for doctoral studies, University of Adelaide (2014)

Presentations, conferences and workshops (selection)

Canadian Nuclear Association Annual Conference, Ottawa (2016), keynote speaker

21st Conference of Parties, Paris, December 2015, presentation and panellist

World Nuclear Association Symposium, London, September 2015, delivered *Worlds Without Nuclear: A systematic review of 100 per cent renewable literature*

International Nuclear Symposium, Tokyo, Japan and site visit, Fukushima Daiichi nuclear power station, Fukushima Province, Japan, May 2015

Nuclear Innovation Workshop, Albuquerque USA, March 3-5 2015, hosted by Idaho National Laboratories, funded by the United States Department of Energy.

What are Australia's nuclear responsibilities? Brisbane Global Café, November 2014, a G20 fringe event hosted by Brisbane Global Marketing

Uranium: Friend or Foe?, Audience participant for Awaken special, NITV, Sydney, August 2014

Back to the Future? The revival of nuclear transport, South Australian Freight Council State Conference, October 2014

High energy, low pollution: Why we must bring forward the Actinide Age, The AUSIMM International Uranium Conference June 2014, Perth

How can community support for the nuclear option be achieved? 'Nuclear Power of Australia?' conference hosted by ATSE, Sydney, July 2013

Decarbonising Australia's electricity supply: The role for small modular reactors, Presenter and panellist for the 2012 Australian Frontiers in Science Conference, 'Science for a Green Economy', Sydney (December 2012)

Breakthrough Dialogue 2012, Sausalito, California, June 2012.

Televised debate victory arguing the case for nuclear power, through Intelligence Squared and televised by ABC Big Ideas, June 2012

Dealing With Denialism: Climate change, presentation for a special event hosted by RiAus, Adelaide, June 2011

ThinkClimate Consulting, sample of project delivery

Green Freight for the South Australian Freight Council

ThinkClimate Consulting was engaged to lead the development of the first sustainability policy and directions document for the South Australian Freight Industry.

NGER Reporting for Heathgate Resources

Heathgate Resources engaged ThinkClimate Consulting to provide assistance in National Greenhouse and Energy Reporting requirements from 2009/2010 to 2014-2015.

Advancing energy efficiency at Adelaide City Council

Adelaide City Council worked with ThinkClimate Consulting to devise an evidence-based approach to set and then meet an energy reduction target. ThinkClimate gathered information from a range of energy audits across Council facilities and integrated it to create a menu of project options. From this menu, scenarios for potential energy savings were generated showing where the savings would be achieved, for what price and what return. The process assisted Adelaide in setting a 15% energy reduction target to be achieved over three years, on the basis of the clear advice

Climate change strategy for the Botanic Gardens of Adelaide

In a recent Strategic Plan, Botanic Gardens of Adelaide outlined an objective to be "at least carbon neutral by 2020". ThinkClimate consulting was engaged by Botanic Gardens to commence the process of meeting this objective with the development of a tailored tool for measuring and reporting greenhouse gases, and an assessment of options to reduce greenhouse gas emission and move towards carbon neutrality.

Carbon neutral strategy for the City of Onkaparinga

ThinkClimate Consulting teamed with EconSearch to deliver a comprehensive and robust strategy for turning a commitment to carbon neutrality into reality for the City of Onkaparinga. The project team undertook modelling of greenhouse gas emissions under a business as usual scenario out to 2040, then assessed a range of options to reduce emissions across the operations of Council before proceeding to offsetting.

Carbon offsetting investigation for Adelaide Airport Ltd

Adelaide Airport Ltd needed investigation of the concept of carbon offsetting the travel for users of the new Adelaide Airport car park. ThinkClimate delivered a comprehensive report that encompassed a review of current offsetting practices in airports and car parks globally, a high level assessment of potential interactions with competition regulations, a review of offsetting options including price, quality and availability, and a critique of the measurement methodology being applied to determine the emission levels.