

## **Climate Change: Where to from here?**

### **Author**

Lowe, Ian

### **Published**

2018

### **Journal Title**

Social Alternatives

### **Version**

Version of Record (VoR)

### **Rights statement**

This work is covered by copyright. You must assume that re-use is limited to personal use and that permission from the copyright owner must be obtained for all other uses. If the document is available under a specified licence, refer to the licence for details of permitted re-use. If you believe that this work infringes copyright please make a copyright takedown request using the form at <https://www.griffith.edu.au/copyright-matters>.

### **Downloaded from**

<https://hdl.handle.net/10072/390945>

### **Link to published version**

<https://search.informit.org/doi/10.3316/INFORMIT.814253601553141>

### **Griffith Research Online**

<https://research-repository.griffith.edu.au>

# Climate Change: Where to from here?

IAN LOWE

## Introduction

Forty years ago, I analysed Australia's future energy alternatives in the very first issue of *Social Alternatives* (Lowe 1977). This was a few years after the 'energy crisis' of the early 1970s, so the oil price had already increased in five years from under two dollars a barrel to about ten dollars. The consequent price inflation had also destabilised most elected governments. The phenomenon of 'stagflation' – inflation without economic growth – discredited Keynesian economics and kick-started the Chicago Schools' great leap backwards to the neo-liberal economic theories that have done untold damage. Although the oil crisis demonstrated that Hubbert's 1956 theory of 'peak oil' was correct, most decision-makers chose to ignore it. I argued that the future would demand a move away from petroleum fuels as they inevitably became more expensive. My discussion did not include any reference to climate change, which only became an issue outside the small community of relevant scientists after the 1985 Villach conference. Within a few years, it became clear that climate change was significant and would demand a new approach to energy supply and use (Lowe 1989). Vested interests and extremely conservative politicians have prolonged the fossil fuel industry for another three decades, largely through carefully orchestrated misinformation, but rapid change is now occurring at the global and local level. While an optimist might think that even Coalition governments will have to bow to the inevitable, the fixation with growth remains a fundamental obstacle. I will summarise the developments in climate science and the changing politics of climate change in Australia, before speculating on the future prospects.

## The science

In 1985, the global scientific community warned that human activity was changing the global climate. The Villach conference statement related observed climate changes to the measured increases in greenhouse-gas concentrations; for the first time, climate scientists spoke up as a global body and suggested a relationship between human activity and the changing climate. The 1987 report of the World Council on Environment and Development, *Our Common Future*, considered the

evidence of limited oil resources and the emerging consensus about climate change (WCED 1987). Recognising the fundamental importance of energy to modern civilisation, it concluded that new energy systems were needed to power human development, but noted that the changes would require 'new dimensions of political will and institutional cooperation'. In 1989, it was clear that human activity was measurably increasing the atmospheric concentration of greenhouse gases such as carbon dioxide and methane. It was also clear that the climate was changing, the most obvious observables being increasing temperatures and different rainfall patterns. However, most cautious scientists thought that the link between the two sets of changes was not proven; they thought it was too early to say with confidence that the changes to our climate were being caused by the increasing levels of greenhouse gases.

The science advanced rapidly. In 1992, the Rio Earth Summit concluded that the climate-change problem was sufficiently urgent to justify developing the Framework Convention on Climate Change. By 1997, the science had provided such convincing evidence of the problem that the global community agreed to the Kyoto Protocol. That agreement was concluded despite the concerted opposition of energy-intensive industries, the commercial world generally and a few rogue states like Saudi Arabia and Australia. The Howard government agreed to the protocol at the Kyoto meeting and trumpeted it as a great deal for Australia; indeed it was, although a bad deal for the planet, as our delegation had persuaded the rest of the world to give us a uniquely generous target. The United States, Canada, Japan and the European Union as a whole were expected to reduce their emissions below the 1990 level by 2012. Norway, Iceland and New Zealand were given more generous targets because those three countries already got more than 85 per cent of their electricity from renewable sources, mainly hydro-electricity and geothermal power, with a significant contribution from wind power in the case of Norway. Australia was alone among those countries heavily reliant on coal in having a target that allowed emissions to increase. Further, in what is known around the world as 'the Australian clause', the Kyoto agreement allowed

---

land use change to be counted. So the reduction in the rate of land clearing since 1990 saw Australia credited as having lowered its emissions. While the developed world overall reduced its carbon emissions per unit of economic output by about 25 per cent between 1970 and 2000, largely through the efficiency improvements spurred by the oil crisis of the 1970s, Australia's performance had only improved about 4 per cent over the same time. Despite the favourable treatment we received, our government joined the Bush administration in refusing to ratify the agreement, delaying the point at which the treaty became legally binding. It also disbanded the National Greenhouse Advisory Panel and did little to rein in Australia's spiralling greenhouse-gas production. More fundamentally, it continued to base the entire pattern of Australian economic development on an implicit assumption that it makes financial sense to export large volumes of low-value commodities, a practice that is only possible for as long as ocean freight is inexpensive (and for as long as it is seen as acceptable to keep burning coal, despite its massive contribution to climate change).

In 2018, there is no longer any serious challenge to the science showing that human activity is changing the global climate in a wide range of ways. The 2016 Paris agreement was recognition by political leaders from all around the world that we face a serious collective problem, demanding concerted global action to slow climate change. A small group still say the science is uncertain, but a recent review pointed out the obvious fact that there is no coherent alternative theory. As Nuccitelli (2015) put it:

*There is no cohesive, consistent alternative theory to human-caused global warming. Some blame global warming on the sun, others on orbital cycles of other planets, others on ocean cycles, and so on. There is a 97% expert consensus on a cohesive theory that's overwhelmingly supported by the scientific evidence, but the 2–3% of papers that reject that consensus are all over the map, even contradicting each other. The one thing they seem to have in common is methodological flaws like cherry picking, curve fitting, ignoring inconvenient data, and disregarding known physics.*

### **The politics**

Australian Coalition governments have consistently acted as if the issue of climate change could safely be ignored. The Howard government's studied inaction became an obvious electoral liability as the 2007 election approached, leading to what appeared a panic move to set up a task force to examine the possibility of using nuclear power. The UMPNER review (Commonwealth of Australia 2007) provided little comfort, even though it was chaired by the head of the Australian Nuclear Science and Technology Organisation. It found that building one nuclear power station would take at least ten and more

probably fifteen years; it also said a carbon price and other forms of public financial support would be needed for nuclear power to be feasible. The Rudd government was elected in 2007 with a clear mandate for action, the incoming Prime Minister having declared that climate change was the biggest moral challenge of our time. His Carbon Pollution Reduction Scheme failed to pass the Senate as it was opposed by the Coalition and the Greens on opposite grounds, the Coalition seeing it as unjustified interference in the market and the Greens regarding it as an inadequate response. It could easily have been very different. Malcolm Turnbull, as Leader of the Opposition, was prepared to support the plan. This led to a challenge to his leadership by disgruntled Liberals opposed to the whole idea of responding to climate change. By a margin of one vote, with one of Turnbull's supporters absent due to illness, Tony Abbott secured the leadership and committed the Opposition to frustrating the government's plan. When he could conceivably have called a double dissolution to resolve the issue, Kevin Rudd chose instead to drop the proposal. I think that was the root cause of the collapse in his standing; if he could abandon the greatest moral challenge of our time, what did he stand for? The ALP, concerned by poll data showing rapidly falling support, chose to remove Rudd and replace him with Julia Gillard.

She said before the 2010 election that there would be no carbon tax under her leadership. When the election produced a hung parliament, she negotiated with the Greens and other cross-benchers to obtain support for a minority government. They introduced a coherent package of measures to respond to climate change: a modest carbon price, a renewable energy target, a carbon farming initiative and measures to protect biodiversity. But Abbott campaigned vigorously against the scheme, calling the carbon price a great big tax on everything, and was elected in 2013.

The Abbott government was so hostile to the whole idea of responding to climate change that it tried to roll back all the Gillard measures. They dissolved the Climate Commission, but it appealed to the community and was crowd-funded as the Climate Council. They scrapped the carbon price, dishonestly claiming that power prices would be reduced, and pared back the renewable energy target. When thirty consecutive negative Newspolls provided the impetus for Malcolm Turnbull to overthrow Abbott and regain the leadership, there was widespread hope that his previously-expressed views would be reflected in a renewed commitment to action. Australia accepted the 2015 Paris agreement to try to keep the increase in average global temperature below two degrees, so we do have international treaty obligations to play a responsible role. The Academy of Science concluded that achieving the Paris target will require global emissions of greenhouse gases to peak by 2020 and then decline rapidly. Unfortunately, it has become apparent that Turnbull paid a high price to become PM.

---

He had to assure the dissident elements in the Coalition that he would not tackle this contentious issue. Appeasing the small group on his government benches that still does not accept the science, the Turnbull administration has no coherent response to climate change. States like South Australia have been attacked for promoting renewable energy, Ministers have assured the community that coal still has a bright future, the government is still supporting the irresponsible proposal to develop new mines in the Galilee Basin, and there has even been a suggestion that the government could subsidise a new coal-fired power station in northern Queensland!

Gore (2006) described global climate change as 'an inconvenient truth', but some intelligent people are still finding reasons to deny the link between human activity and the changing global climate, more than twenty years after the relationship was established to the satisfaction of scientists working in that field. As Oreskes and Conway (2010) have shown, those who still deny the science of climate change usually have a very conservative view of the world. They mindlessly support unfettered markets to produce wealth and wellbeing. They refuse to accept that human wealth-producing activity could change the global climate, because that would demand government action to curb some profitable activities. So, the science is seen as biased, unreliable, or part of a global conspiracy to hold back progress. In a revealing comment some years after he left office, Mr Howard said that he preferred to trust his instinct rather than the predictions of climate science; in other words, he prefers to cling to his myths (Howard cited in Miller, 2013) rather than accept the science. Since we are now on track for much greater increases in average temperature than the Paris target of two degrees, espousing a business-as-usual approach requires denying or trying to discredit the science.

## Prospects

Where can we go from here? There is good news and bad news. The good news is that the community has moved on, in Australia as in other countries. In the USA, thirteen States and dozens of cities have adopted serious programs to slow climate change, despite the systematic refusal of the national Congress to act. The Weatherill government in South Australia oversaw a massive investment in wind and solar power, so the State now gets about 50 per cent of its electricity from renewables, with further expansion planned. Several large-scale solar power installations are under way in Queensland. Perhaps more importantly, the community has voted with its wallets and roofs. About 1.6 million households now have solar panels providing some or all of their electricity, while about a million use solar hot water. Use of active transport – cycling, walking and various modes of public transport – is increasing.

The bad news is that Coalition governments still act as if the science can be ignored. That problem is not confined

to climate change. As discussed earlier, Hubbert (1956) argued that US oil production would peak in the early 1970s and then decline; when this prediction proved accurate, the same approach was used to show that global production of conventional oil would peak about 2010 and then decline (Deffeyes 2001). Although there is solid evidence for this theory of 'peak oil', most transport planning still implicitly assumes unlimited petroleum fuels. More generally, the first global systems models showed in the early 1970s that there are limits to the scale of resource use and productive economic activity that the natural systems of the planet can accommodate (Meadows et al. 1972), but forty years later most decision-makers still behave as if limitless growth is possible. The 'standard world model' of *The Limits to Growth*, based on extrapolating the growth trends that existed in 1970, led to economic and ecological decline in the early to middle decades of this century. Recent comparisons with forty years of data show that the global community is still on that gloomy trajectory (Turner 2013). Five reports on the state of the Australian environment have shown we have serious problems (State of the Environment Advisory Council 1996; State of the Environment Council 2016). Similarly, five reports on the global environmental outlook have documented the crisis at the global level, highlighted by the dramatic decline in biodiversity (UNEP 2015).

Despite the detailed explanations of the environmental emergency we face, most decision-makers still behave as if the problems caused by growth in human consumption can either be safely ignored or, even more improbably, solved by even more growth. The persistent delusion is that all our social and environmental problems can be solved by economic growth. While Coalition administrations are more obviously acting on behalf of the business community, ALP governments also seem committed to promoting growth. Unless we can escape from the toxic meme of growth, there is no realistic prospect to slowing climate change and shaping a future that could, at least in principle, be sustainable.

## References

- Cook, J. 2016 'Here's what happens when you try to replicate climate contrarian papers', *Journal of Theoretical and Applied Climatology*, 126: 699-703.
- Commonwealth of Australia 2007 *Uranium Mining, Processing and Nuclear Energy – Opportunities for Australia?*, Report to the Prime Minister by the Uranium Mining, Processing and Nuclear Energy Review Taskforce, Canberra.
- Deffeyes, K. 2001 *Hubbert's Peak*, Princeton University Press, Princeton.
- Gore, A. 2006. *An Inconvenient Truth*, Paramount, Hollywood, California.
- Miller N., 2013 'The claims are exaggerated', <http://www.smh.com.au/federal-politics/political-news/the-claims-are-exaggerated-john-howard-rejects-predictions-of-global-warming-catastrophe-20131106-2wzza.html> (accessed 13 November 2013).
- Hubbert, M. 1956 'Nuclear energy and the fossil fuels',

- Drilling and Production Practice*, American Petroleum Institute, 7-25.
- Lowe, I. 1977 'Energy options for Australia', *Social Alternatives* 1: 63-69.
- Lowe, I. 1989 *Living in the Greenhouse*, Scribe Books, Newham Vic.
- Meadows, D. H. Meadows, D. L. Randers, J. and Behrens, W. 1972 *The Limits to Growth*, Earth Island, London.
- Nutticelli, D. 2015 'Here's what happens when you try to replicate climate contrarian papers', *The Guardian* 25 Aug <https://www.theguardian.com/environment/climate-consensus-97-per-cent/2015/aug/25/heres-what-happens-when-you-try-to-replicate-climate-contrarian-papers> (accessed 3/7/2018).
- Oreskes, N. and Conway, E. 2010 *Merchants of Doubt*, Bloomsbury, New York.
- State of the Environment Advisory Council 1996. *State of the Environment Australia*, CSIRO Publishing, Melbourne.
- State of the Environment Council 2016. *State of the Environment Australia*, <https://soe.environment.gov.au/theme/overview> (accessed 28 March 2018).
- The Guardian* 25 Aug <https://www.theguardian.com/environment/climate-consensus-97-per-cent/2015/aug/25/heres-what-happens-when-you-try-to-replicate-climate-contrarian-papers....>(accessed 3/7/2018)
- Turner, G. 2013. 'On the cusp of collapse? Updated comparison of The Limits to Growth with historical data, *GAI/IA – Ecological Perspectives on Science and Society* 21(2): 116-124.
- UNEP 2015', *Global Environmental Outlook 5*, <http://web.unep.org/geo/assessments/global-assessments/global-environment-outlook-5> (accessed 28 March 2018).
- World Council on Environment and Development 1987 *Our Common Future*, Oxford University Press, Oxford.

### Author

Ian Lowe AO is emeritus professor of science, technology and society at Griffith University and an adjunct professor at two other universities. He has filled a wide range of advisory roles for all levels of government, including chairing Brisbane's environment advisory committee for several years, and he chaired the advisory council that produced the first independent national report on the state of the environment in 1996. He has been a Fellow of the Australian Academy of Technology and Engineering since 2005. The International Academy of Sciences, Health and Ecology recently awarded him the Konrad Lorenz Gold Medal for his contributions to sustainable futures.

### Back

A month afterwards,  
when he returned from the dead,  
his mother saw him approaching their house.  
She screamed. She cried with fear and joy  
and slapped him for a fake and monster  
and cried some more with both arms around him.

Much thinner and subdued,  
he sat in the kitchen receiving wary visitors,  
the bowl of home made corn soup left untouched.  
We doubted, tested, asked whose cousin had red hair  
or a limp, and he knew it all,  
adding anecdotes to prove that he was real.  
What was it like, we asked?  
What was death?  
No fun, he said, but not that bad.  
There's music, though you wouldn't sing to it,  
and the weather is like an endless autumn afternoon  
when the clouds roll in.  
You get used to things.  
Mostly, I just read to pass the time.

Then his sister asked,  
So why did you come back?  
He looked at her a while and said,  
Sometimes they make mistakes.  
They told me to tell you it's not too bad,  
that you might even like it.  
that you'd see your recent weeks here as a bonus.  
She just stared back at his pale face,  
silent in her bliss and dread.

STEVE EVANS,  
ADELAIDE, SA