

The Mad Rush to Decarbonise

Ross Garnaut's Unmeetable Challenge

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In 1759 Samuel Johnson wrote *Rasselas, Prince of Abyssinia*, a tale of three young people who had grown up in royal seclusion, but who escaped into the wider world in order to experience what the world had to offer. They were Rasselas, the prince, Princess Nekayah his sister, and Pekuah, her handmaiden, and they were accompanied by Imlac, an older man who is described as a poet, but who is Johnson's alter ego.

Eventually they find themselves in Cairo where they enjoy meeting and listening to the sages of that city, but one such scholar is of particular interest to us today. He is described only as Imlac's astronomer, and eventually this man unburdens himself, to Imlac, of the onerous duties which weigh upon him.

"Hear, Imlac, what thou wilt not without difficulty credit. I have possessed for five years the regulation of weather, and the distribution of the season: the sun has listened to my dictates, and passed from tropick to tropick by my direction; the clouds, at my call, have poured their waters, and the Nile has overflowed at my command; I have restrained the rage of the dog-star, and mitigated the fervours of the crab. . . . I have administered this great office with exact justice, and made to the different nations of the earth an impartial dividend of rain and sunshine. . . ."

The astronomer responded to Imlac's expressions of doubt with this assurance.

"Not to be easily credited will neither surprise nor offend me; for I am, probably, the first of human beings to whom this trust has been imparted. Nor do I know whether to deem this distinction a reward or a punishment; since I have possessed it I have been far less happy than before, and nothing but the consciousness of good intention could have enabled me to support the weariness of unremitted vigilance."

The astronomer's predicament is replicated today in the problems now facing Professor Ross Garnaut, the eminent economist who has been entrusted by the State Labor governments and now Prime Minister Rudd with advising them on what to do about "climate change".

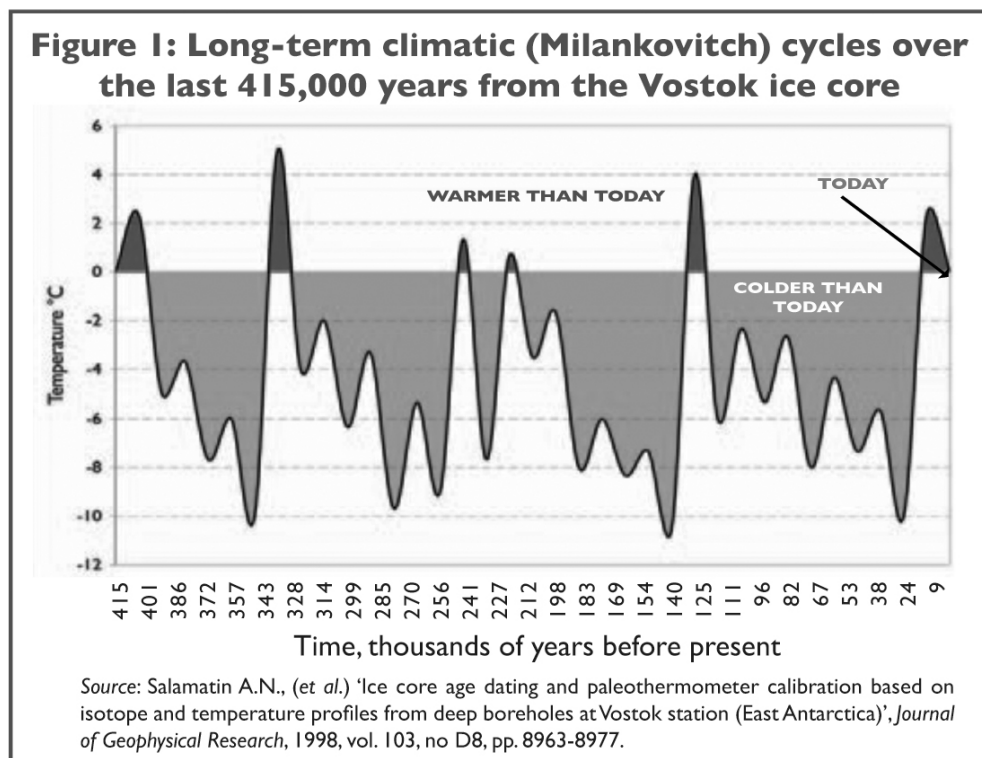
During the 2007 federal election campaign which culminated in the defeat of the Howard Government, Labor leader Kevin Rudd promised frequently to "manage climate change" and particularly to ratify the Kyoto Protocol, which he did with much fanfare soon after his election victory. Since then the drought has broken and a number of towns in Queensland are coping as best they can with major floods.

Managing climate change is something new in the history of mankind. Hitherto people have adapted to warmer or colder conditions as best they could. Many people perished from cold and hunger as the Little Ice Age, 1350 - 1850 AD, succeeded the Mediaeval Warm Period 800 - 1100 AD, including the inhabitants of Greenland who had lived there for 300 years or so.

The theory of climate control now officially accepted by most Western governments and, of course, the UN and its climate agency the Intergovernmental Panel on Climate Change (IPCC), is that mankind can control the earth's climate by reducing anthropogenic emissions of carbon dioxide (the output from burning fossil fuels containing carbon) from the current annual 7 Gigatonnes (billion tonnes) of contained carbon to about 1.5 GtC pa. The atmosphere contains about 730 GtC, and the annual flux between oceans and land surfaces, and the atmosphere is about 130 GtC. If this theory were correct the multiplier effect on climate control which changes in the output of anthropogenic carbon dioxide, say 3 GtC, in the context of a total flux of 130 GtC, would be huge.

Despite its success in official circles, the theory of climate control through anthropogenic carbon dioxide has no historical evidence to support it. Nor, despite energetic support from the CSIRO's Division of Atmospheric Research, and the Royal Society of London, is there any scientific theory which gives it credibility.

In 1981 the distinguished astronomer and physicist Fred Hoyle published *Ice: The Ultimate Human Catastrophe* (OUP). The book was an attempt to provide a theory which would explain the periodic descent of the Earth into ice age conditions (approximately every 100,000 years) and its subsequent resumption of the climate we now enjoy (called interglacials) some 85,000 years later. The current interglacial began about 12,000 years ago; so if the periodicity which is manifest in the ice cores from the Antarctic is maintained, then sometime in the next millennium or the one after that, the Earth will be plunged quite rapidly into the next Ice Age. Although Hoyle's theory of Ice Age precipitation has not received much support, the book is still extremely useful as a compendium of geological knowledge about the history of our planet and the various theories which have been advanced as causes of the periodic ice ages and interglacials which have characterised the last 500,000 years.



Hoyle discusses the greenhouse effect and way in which water vapour and carbon dioxide operate to modify the radiation balance which helps to maintain Earth's temperatures. At their current levels. The following paragraphs (p 122) tell us all we need to know about atmospheric carbon dioxide and its effect on the earth's climate.

Let us look first at the radiation traps. With an average temperature of 14 deg C (with 25 deg C occurring in the tropics), the evaporation rate of water into the atmosphere must always be greater than is necessary to maintain the water-vapour trap. Only the carbon dioxide trap is therefore relevant to this discussion. As I explained earlier, the carbon dioxide trap is highly effective over a wavelength range from 14 microns to 16.5 microns. By blocking the escape of heat radiation with wavelengths in this range the carbon dioxide reduces the radiating efficiency of the Earth by 15 percent.

If carbon dioxide were entirely removed from the atmosphere, the radiating efficiency of the Earth's surface would rise from 60 per cent to 75 percent. Keeping the same reflectivity as before (36 percent) it is easy to calculate that the average temperature of the Earth would fall to 270K (-3 deg C)..

The idea that a removal of the carbon dioxide trap caused the ice ages was suggested more than half a century ago by the Swedish chemist Svant Arrhenius. .. The efficiency of the carbon dioxide trap is insensitive to the amount of carbon dioxide in the atmosphere: increasing the amount five-fold would scarcely change the trap (despite) the stories that are currently being circulated by environmentalists. Only if the amount of carbon dioxide were enormously increased. . . would the trap widen its influence significantly. The trap would not contract very much either, unless the amount of atmospheric carbon ran down almost completely – a condition that would produce a catastrophic reduction in the growth of vegetable material, leading in turn to extinction of animals of all kinds, since animals live by eating vegetation or by eating other animals that eat vegetation.”

Hoyle is summarising the logarithmic impact of carbon dioxide on the radiation balance. As concentrations of carbon dioxide in the atmosphere increase, the impact of each additional increment of CO₂ has less and less effect on the radiation balance. Present concentrations are approximately 380 parts per million by volume (ppmv). A doubling of concentration - to 760 ppmv - will have only a minuscule impact on the radiation balance and on the temperature. An increase of approximately 0.5 deg C is likely.

But although the temperature effects of additional carbon dioxide will be completely masked by other climate drivers - notably the sun - the benefits which will accrue from increasing carbon dioxide in the atmosphere will be very great indeed. Plant growth of all kinds will be greatly encouraged, just as greenhouses enriched with additional carbon dioxide provide more rapid growth today .

But against these facts we have governments and their scientific advisers throughout the West committed to decarbonisation policies which will, if seriously implemented, cause great economic hardship. Our civilisation is based on the use of cheap energy (mostly in the form of gas and electricity) and cheap liquid fuels for transport, (mostly petrol and distillate). Our economy is thus carbon-based and any serious attempt at decarbonisation will cause economic upheaval rivalled only by the exigencies of war. Australia is more carbon intensive than most industrialised countries because our low-cost coal resources and abundant supplies

of natural gas provide the foundation for energy-intensive export industries such as aluminium smelting and alumina production, steel production, auto-manufacturing, fertiliser production, and minerals processing.

Aaron Wildavsky,¹ in 1992, noted the implications of serious decarbonisation:
Global warming is the mother of environmental scares. In the scope of its consequences for life on planet Earth and the immense size of its remedies, global warming dwarfs all the environmental and safety scares of our time put together. Warming (and warming alone), through its primary antidote of withdrawing carbon from production and consumption, is capable of realizing the environmentalist's dream of an egalitarian society based on rejection of economic growth in favour of a smaller population's eating lower on the food chain, consuming a lot less, and sharing a much lower level of resources much more equally.²

Climate catastrophists such as Graham Pearman (ex CSIRO Division of Atmospheric Research), Lord May of Oxford (former president of the Royal Society), and the CSIRO's Dr Jim Peacock, who is also Australia's Chief Scientist, either advocate policies of rapid and extreme decarbonisation with specific targets and timetables (reducing anthropogenic emissions to 1.5 GtC by 2050) or, more cautiously, urge non-specific but nevertheless severe decarbonisation regimes. Jim Peacock, for example, said the following at a meeting of the Royal Society of Victoria on 13 Sept 2007.

We must reduce the steep rise of [carbon dioxide] emissions. Mitigation measures and the introduction of new low-carbon energy and fuel systems take time - not overnight happenings.

We need urgent action to begin to reduce emissions and we need to prepare for the impact of the emission driven climate consequences that are already inevitable and with us whilst Australia attempts to reduce our footprint.

The problem with all this eschatological rhetoric is that there is not the slightest prospect of such decarbonisation taking place. India and China are embarked on economic growth trajectories which have no precedent in world history. They have made it clear, in words that cannot be misunderstood, that they will not abandon their path to modernity, a path which includes massive increases in coal-fired electricity generation, year after year after year. And this is where Ross Garnaut's dilemma becomes acute.

Ross Garnaut was a key player in the Hawke Government, and his advocacy on the evils of protectionism, on the benefits of floating the dollar, and his unswerving support for the GATT and its successor organisation, the World Trade Organisation (WTO) helped greatly to push the economic reform programme which made the Hawke Government arguably the most important commonwealth government since the Deakin governments of the first decade of federation. The winding back of protectionism, a policy which has laid the foundation for sustained economic growth since the early 1990s, was an historic event, and it is arguable that without Ross Garnaut active in the corridors of power, it may not have happened.

As well as a passionate free trader, Garnaut is a Sinophile, and from 1985 to 1988 he was Australian Ambassador to China, where he did much to establish a relationship which has seen China replace Japan as our largest trading partner. In 1989 he wrote *Australia and the North East Asian Ascendancy: Report to the Prime Minister and the Minister for Foreign Affairs and Trade*.

It was a prescient analysis of where China, particularly, could be heading after Deng Xiaoping's reforms began to transform the nation.

Western ambitions to impose a global regime of decarbonisation, if necessary using the WTO as an enforcement mechanism, have already been set at naught by the Chinese and Indian Governments. Prior to the Bali meeting of the UN FCC, Indian Prime Minister Manmohan Singh and Chinese Prime Minister Wen Jiabao, held a joint press conference in Singapore on 21 Nov 2007. The occasion was the leaders meeting of the East Asia Summit (EAS) and the event was reported in *The Hindu*, but in no Western media of which I am aware.

The Hindu's P.S. Suryanarayana wrote thus:

Prime Minister Manmohan Singh said his "first priority is India's economic growth" and climate change issues would be looked at under that prism. India's greenhouse gas emissions were now "much smaller" than those of the developed countries, especially when measured on a "per-person basis."

India being "entitled" to the same standards as those that the developed bloc applied to itself, he would be prepared to match any commitments that might be made by the industrially advanced nations within the framework of economic growth.

Summing up India's stance on these lines, EAS Chairman and Singapore Prime Minister Lee Hsien Loong said, at a post-summit press conference, that he did "not know whether that is the position which will be negotiated in an international agreement" on climate change.

China and India made "eloquent presentations" on why economic development was a priority for them, Mr. Lee pointed out. The leaders of the 16 EAS countries later signed a Declaration on Climate Change, Energy and the Environment. At the signing ceremony, Mr. Lee was flanked by Dr. Singh and Chinese Prime Minister Wen Jiabao, as if to convey the political symbolism of the relevance of these two countries to the global discourse on climate change.

Mr. Lee described the EAS document on this issue as "a declaration of intent, not a negotiated treaty."

On the cross-linkages between economic development, energy security and climate change, Mr. Lee quoted Dr. Singh as having told his EAS colleagues that he had "no time to worry about global warming" after reading headlines suggesting that Venezuela would like crude oil prices to double from the current level of \$100 a barrel.

It is difficult to understand why Western journalists such as Paul Kelly of *The Australian* are blind and deaf to what the Indian and Chinese leaders are saying. These nations are not going to decarbonise their economies. On the contrary, they are going to burn coal and emit carbon dioxide as never before in the history of mankind. If the West tries to impose decarbonisation globally through carbon tariffs legitimised by the WTO, then that will mean the end of the WTO. Will the West then try to impose decarbonisation through military force?

The climate catastrophists have no answer to these matters other than to bleat about moral suasion. If the Rudd Government decided to take its election promises regarding decarbonisation seriously, by adopting, for example, California Governor Schwarzenegger's

embrace of an 80 per cent reduction in greenhouse gas emissions below 1990 levels by 2050, then the Commonwealth Government would have to impose the following regime on its hapless citizens.

First, its coal fired power stations will have to be replaced within twenty years with nuclear power stations, and the following arithmetic will apply. Current electrical generating capacity in Australia is 45 GW of which over 90 percent is coal based. To replace coal with nuclear would cost \$90-120 billion at current prices (\$US 1,500-2000 per kW), and this does not take into account compensation to the owners of the existing coal fired stations, arguably another \$60 billion or so). Nor does it take into account increases in electricity consumption because of population growth or increases in electrical intensity of the economy. Even if the money were available for such a huge investment, it is extremely doubtful that the supply of skills and materials needed for such a programme were available anywhere in the world. The price of electricity to the domestic consumer would increase by a factor of at least 50 percent, perhaps significantly more.

It should be noted in passing that the Green mantra of “wind and solar” is economic nonsense, and that the current output of wind turbines is heavily subsidised at substantial cost to the consumer. The basic costs of electricity production are never mentioned by the decarbonisers, but it is worthwhile repeating them here. Electricity from the brown coal stations of Victoria’s Latrobe Valley costs about \$25-\$30 per MWhr. From the black coal stations of NSW and Queensland, the cost is about \$30 -\$40 per Mwhr. Dr Switkowski claimed that nuclear power in Australia would cost 20 to 50 percent more than coal based power, but his estimates have been contested, and most analysts argue that nuclear power would cost between \$70 and \$80 per MWhr. There is a big difference, of course, between power costs at the power station bus-bars and power costs to the domestic consumer, and a 100 per cent differential at the power station could translate to a 50 percent increase to the domestic consumer. To make nuclear power competitive with brown coal-based electricity would require a carbon tax of between \$40 and \$50 per tonne of carbon, and for black coal between \$30 and \$40 per tonne.

Wind turbines produce electricity for more than \$80 per Mwhr, but the product is essentially worthless since it cannot be relied upon when required. Solar power has long been the dream of the decarbonisers, but every attempt to build a competitive solar power station has ended in tears. The CSIRO built a large, albeit experimental, solar power unit at a carefully chosen site at White Cliffs in NSW. It was a complete economic failure. A private company built a large solar generating unit in the Mojave Desert in California using hundreds of parabolic mirrors. It went bankrupt. Solar power costs upwards of \$200 per MWhr and is available only when the sun is shining.

Along with the shift to nuclear power stations it would be necessary to prescribe that most automobiles were to be powered by batteries. Although technically feasible, battery-powered automobiles would be much more expensive, and far less convenient, than the petrol- or diesel-powered vehicles upon which modern economies now depend. The auto-manufacturing industry would doubtless be able to switch from the IC engine-powered automobiles to battery-powered vehicles, and within 20-25 years or so, a very substantial change to the national car fleet could, at least in theory, be implemented. But the inherent inferiority of the battery-powered vehicle means that any investment in its production would be fraught with sovereign risk.

During the election campaign Kevin Rudd used the Garnaut Inquiry which had been established by the State Labor Governments in April 2007, as a means of avoiding any commitments on decarbonisation. Since then the Prime Minister has deferred to Professor Garnaut as someone whose advice on “managing climate change” will have *ex cathedra* authority. Given the elevated position in which the Prime Minister has placed him it will be difficult for the Rudd Government (and the State Labor Governments) to do other than what Ross Garnaut advises. This puts Professor Garnaut in a position of unprecedented authority. When the Chifley Labor Government decided, somewhat abruptly, in 1946 to nationalise the banks, Chifley himself announced the decision and in 1949 paid the political price for it. But he did not defer to an economic guru for advice. Decarbonisation will impose at least as dramatic a change to our economic and social life as nationalising the banks. It is far more about changing the way people live than controlling the climate. So the Garnaut Inquiry and the report which has been promised for June 2008 takes on the most profound significance. What, then, do we know of Ross Garnaut’s mind on these issues?

A week after the Indian and Chinese prime ministers held their joint press conference in Singapore, Ross Garnaut delivered the S.T. Lee Inaugural Lecture at the ANU. It was entitled *Will Climate Change bring an End to the Platinum Age?* and the question which Garnaut seeks to answer is whether decarbonisation, the need for which he takes as a given, will bring economic growth in China, India, Vietnam and sub-Saharan Africa to a halt.

In this paper Garnaut displays a degree of intellectual confusion which is surprising in one so intellectually eminent. For example; he follows Sir Nicholas Stern unquestioningly in describing the difficulty of obtaining an international agreement amongst the major world powers to decarbonise, as a prisoner’s dilemma problem. This is nonsense. If there were negative externalities (to use the economists’ jargon) in burning fossil fuels, then it would be a problem of the commons. A good example of a real problem of this kind is fishing in international waters, where no one has an interest in preserving fish stocks for someone else to exploit. But there are no negative externalities in putting back into the atmosphere the carbon dioxide that was so abundant in previous geological eras (when concentrations were eighteen times what they are today).

Like Stern, Garnaut has swallowed hook, line and sinker, the IPCC’s faith in anthropogenic carbon dioxide as an instrument of climate control. In this he is in accord with the statements made by the previous prime minister John Howard, and PM Kevin Rudd. But given that China and India are not buying decarbonisation as anything but a Western device to retard development in their countries, it would make good sense for Garnaut to study the voluminous literature which makes nonsense of the IPCC’s claims, and in particular to find out why the hundreds of sceptics with serious scientific qualifications (which gives their arguments authority) have been so scathing in their condemnations of the IPCC’s work and output.

If Garnaut has studied submissions to his Inquiry he will be aware of the 400 or so scientists, and their comments, compiled by Senator James Inhofe, the ranking member of the US Senate’s Environment and Public Works (EPW) Committee. Included amongst them are men and women at the very top of their field, with international reputations to protect. One such comment has to suffice here.

Atmospheric scientist Dr. Hendrik Tennekes, a scientific pioneer in the development of numerical weather prediction and former director of research at The Netherlands' Royal National Meteorological Institute, and an internationally recognized expert in atmospheric boundary layer processes, "I find the Doomsday picture Al Gore is painting - a six-meter sea level rise, fifteen times the IPCC number - entirely without merit," Tennekes wrote. "I protest vigorously the idea that the climate reacts like a home heating system to a changed setting of the thermostat: just turn the dial, and the desired temperature will soon be reached."

In this lecture Garnaut declares himself in favour of an emissions trading scheme, an arrangement similar to the taxi licences which every State imposes within its jurisdiction. It is desired, particularly by those already within the taxi industry, to limit the number of taxis on the road. So a licence to operate a taxi is required, and these licences can be traded like houses or paintings. The market value of these licences in Melbourne and Sydney is approximately \$300,000, and as the market expands and it is thought desirable to issue new licences, who gets them and at what price are issues of great importance.

With carbon licences, companies are allocated, or are required to purchase, licences or permits to emit carbon dioxide. If they have some permits to spare, they can sell them in a market established by statute. If they need to obtain more permits they can buy them; if they can find a seller. How these pieces of paper are to be authenticated, and by whom, is something to ponder over.

Commenting on this scheme, and on the European market already in operation, NZ economist and energy consultant Bryan Leyland summarized the potential dangers of carbon trading in these words:

So, to my knowledge, carbon trading is the only commodity trading where it is impossible to establish with reasonable accuracy how much is being bought and sold, where the commodity that is traded is invisible and can perform no useful purpose for the purchaser, and where both parties benefit if the quantities traded have been exaggerated.

It is, therefore, an open invitation to fraud, and that is exactly what is happening all over the world.

Robert Shapiro, influential US economist and former Under Secretary of Commerce for Economic Affairs, 1997-2001, recently commented on the ABC along similar lines:

There's enormous potential for cheating, and in particular by corrupt autocratic governments. The notion that, look, it's hard enough in a democratic and transparent system to not have permits be distributed or taxes imposed without special preferences for powerful industries. In Germany, for example, recently the German government exempted coal production from the European trading system. Well, that's a rather large greenhouse gas producer that they...well, it was political pressure. Imagine what Vladimir Putin would do with this. Imagine what the Chinese government would do with this. Imagine what Sudan and Iran would do with this.

If a developing country was able to overstate its initial emissions and consequently show great progress, they could then have permits to sell to everyone else, and it becomes a source of hard currency. Under Kyoto, if everyone had participated in Kyoto as written, because of the 1990 base year that created a windfall for Russia, Russia could have been expected to earn \$40 billion a year in hard currency selling

excess permits. I really don't think that the home owners and the drivers in Australia and the US should be helping to finance the despotic regime of Vladimir Putin.

If Professor Garnaut maintains the position he embraced in his S.T. Lee Lecture, and if the Rudd Government accepts his advice, then Australia will be burdened with a regime comparable in its malignancy to the protectionist regime which Alfred Deakin imposed on Australia in the early years of federation.

How can Professor Garnaut be dissuaded from pursuing such a course? Imlac's astronomer was brought back to reality and relieved of his onerous, albeit imaginary, responsibilities through the society of Princess Nekayah and her handmaiden Pekuah. Such a remedy does not seem possible in this case. If however, the economic malaise triggered by the sub-prime mortgage crisis in the US continues to spread, and Australia by mid-year is faced with a contracting economy, then the last thing a new government needs are remedies for climate change which will have no impact, whatsoever, on the world's climate but will do serious damage to our economic life.

In the absence of the charming Abyssinian young ladies who distracted the astronomer, a telephone call from the Prime Minister might do the trick.

1. Noted American scholar who published extensively on risk and risk management (amongst other topics) and whose 1982 book *Risk and Culture: An Essay on the Selection of Technical and Environmental Dangers* (with Mary Douglas) was seminal.

2. Introduction to "The Heated Debate " by Robert Balling Jr, PRIPP, San Francisco 1992

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