
The Economics of Climate Change

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You may be wondering why, all of a sudden, climate change is the new world peace - daily front page news.

There are several reasons for this, not least that the better the science gets, the scarier our predicament appears. The latest International Panel (IPCC) report released last month, best estimate projects our world will warm between 1.8 and 4.0 degrees Celsius by the end of this century. That's on top of the 0.6 degree warming in the last 100 years.

If you understand climate history these are truly terrifying numbers. We thought it was about Polar Bears – we now know it has far more significant implications.

The significance of even one or two degrees warming is beginning to hit home. The Stern Review on the Economics of Climate Change, released in October last year, was significant because, finally, someone looked at the cost of doing nothing, and found it to be more than the costs of taking action – far more in fact.

This is no longer a debate on whether man's activities are causing the climate to change, it's now a debate about how to address it. This challenge presents us with threats. It also presents us with opportunities.

This crisis could mean the end of our civilisation, but it could also drive the next industrial revolution.

Nobody set out to destabilise the world's climate. The people who built the power stations, the steam engines, and the motor cars were not evil, they were actually the heroes of their generation. Their machines advanced human welfare and created our western civilisation.

However, we have now discovered that the fossil fuels that power the machines are changing our world's weather. Carbon pollution has the potential to seriously damage the very civilisation the industrial revolution helped create.

What I want to show you today is that, using conservative economics, addressing climate change is not a conflict between economic growth and the environment.

This is a contest of values, on whether we are prepared to take responsibility for the future or whether we simply vacate the space and leave our future to the vested interests of today.

Fourteen years ago Australia joined with the rest of the world in ratifying the Framework Convention on Climate Change. We agreed to stabilise *'greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'*.

Fourteen years, half a generation, and the world still can't agree on a plan. The challenge before us is enormous.

This first graph shows what the world's climate scientists tell us we need to do if we are to avert serious damage to the world's climate system.

It's a truly frightening graph. We need to not just stop the explosive growth in emissions, we actually need to cut existing emissions by at least 60 per cent within the next 40 years.

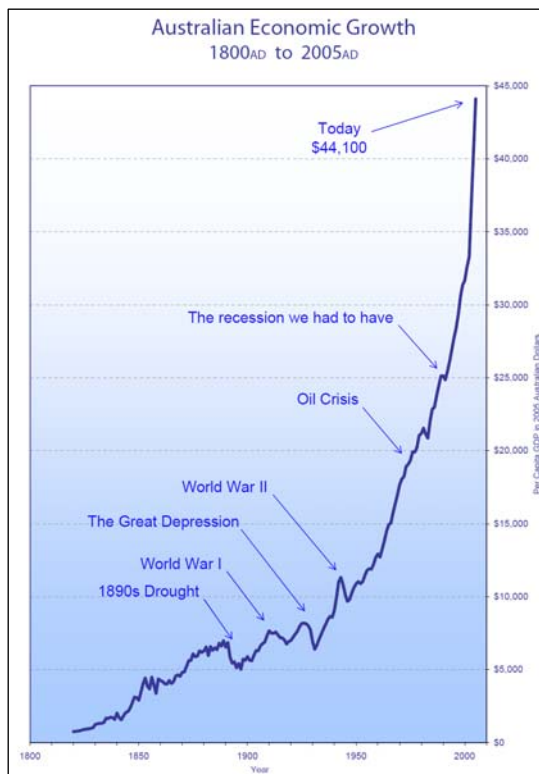
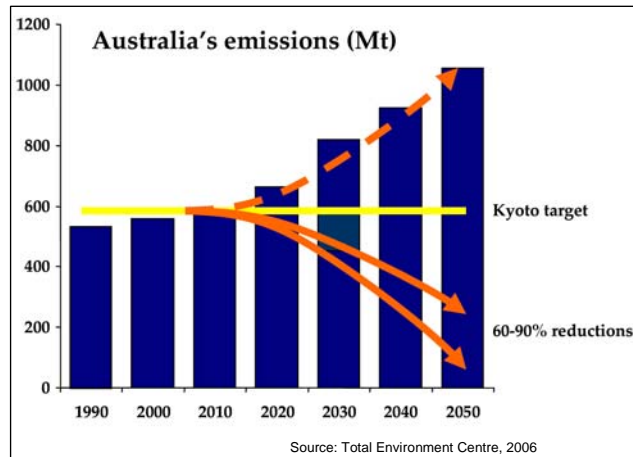
It's no wonder people are frightened into inaction. To give up the machines means giving away our way of life. But they need not be frightened.

We don't need to turn our back on the industrial revolution, we just need to change the way we power our machines.

And of course, the opportunities for reforestation and increasing the economic value of forest industry products, some of which will be the subject of today's seminar are enormous.

We've heard a lot about carbon sequestration lately, but it's all been part of the so-called 'clean coal' debate. Many people in this audience know there is a far greater opportunity in carbon sequestration from living systems: trees, wood products, forests, oceans and soils.

If we are clever about this, by reducing carbon pollution, we can create an economic system that will result in healthy landscapes being more valuable than cleared ones. Just imagine what that will mean for managing planet earth.



Let me put the economics, as this issue affects Australia, in proper perspective.

This second graph shows you the economic history of modern Australia. It shows the explosion of wealth in Australia since the industrial revolution – how the western world has embraced the democratic capitalist model as the vehicle for human advancement with spectacular success.

By the time Australia had become a nation in 1901, average incomes had reached \$6,000 in today's money.

But that was just the beginning.

Just look at the economic growth since world war two. Today our average income in this country is over \$44,000 for every man woman and child.

We are eight times more wealthy than our grandparents, and we live in a world beyond their wildest imagination.

The 2002 Intergenerational Report prepared by the Australian Treasury, predicts that, short of any unexpected shocks, this explosion in wealth will continue between now and 2050, at between 1.5 and 2.1 per cent of GDP per annum.

If the lower rate of 1.5 per cent per annum is projected over the following 50 years, at the end of this century, living standards in Australia will rise from \$44,000 per person, to over \$185,000 per person.

And as you know, Treasury is a very conservative agency.

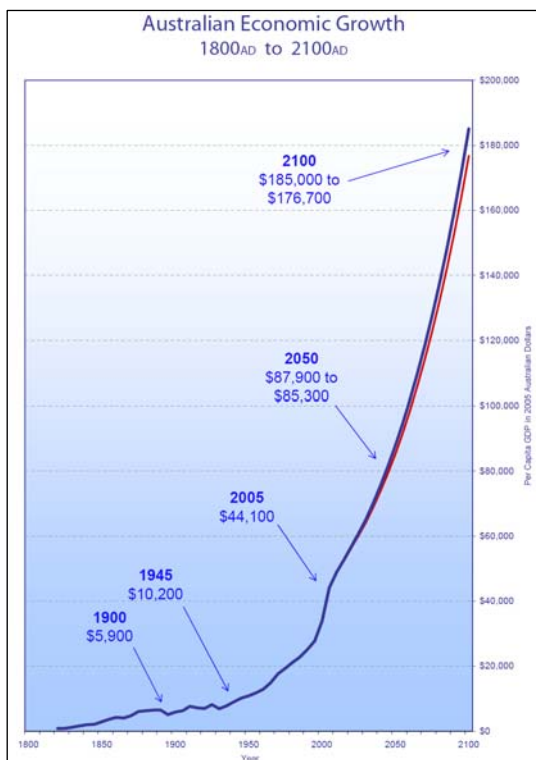
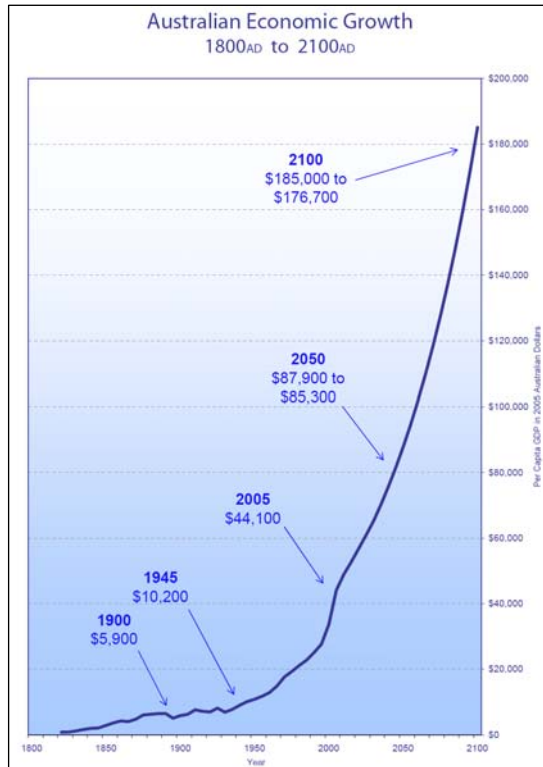
That's right, by the end of this century, over \$185,000 for every man, woman and child in today's dollars.

Now I know what some of you are thinking – yes, we've all seen these hockey stick graphs before. But bear with me – remember, to economists and business people, the impact of compound economic growth is well known and underpins many of your long range investment strategies. But most people are not financiers.

We all need to reflect on this graph for a moment. No matter how well you understand economics, the impact of these figures are as unimaginable to us today as it would have been unimaginable for our grandparents, at the turn of last century, to conceive the world they were creating for us.

But here's the key – our behaviour today is putting all this at risk ... and for what?

We're putting it all at risk because we believe it is wealth or the environment.



This final graph should leave your jaw on the ground. The blue line is, as I said, projected economic growth based on the Treasury projections.

The red line is based on the best available international modelling of the economic impact of deep cuts in global emissions, involving high income countries reducing their greenhouse footprint by at least 60% by 2050.

Just compare the extrapolated economic growth projections from our Treasury and how it would differ if, according to the latest economic estimates, the world stabilised CO₂ emissions.

It doesn't look at all like the recession we've been conned into believing will happen does it? Far from it.

We can have an annual income in today's dollars of \$185,000 and risk everything, or an annual income of \$177,000 and make our contribution to stabilising the world's climate.

By the way, this figure assumes that the economic impact on Australia is around three times the average impact for the world as a whole. I had to do this because if I didn't you wouldn't be able to see any difference!

We are presented with a very powerful morale choice, because risking our climate for the sake of an infinitesimally small amount of economic growth is not heroic – it is greed and it puts at risk everything we have built.

We simply have to stop carbon pollution entering the atmosphere. There are many innovative things we can do, but we cannot hope to fix the problem unless our governments put a cap the level of carbon that's allowed to be emitted.

We can do it by regulation, but that would mean governments trying to pick winners on a scale we have never seen before in Australia. It means they will be intruding into just about everything we do. Russia tried that model and it was an economic, social and environmental disaster. Or we can trust the system that created our wealth in the first place, put a price signal on carbon and allow industry to find the cheapest way to fix the problem for us.

They can do this by either putting in a carbon tax or by setting up an emissions trading scheme. The advantage of a carbon tax is that it's simple to establish. The downside is that we will have to negotiate the level time and time again. After 15 years, we can't even get governments to agree to set a price.

The advantages of an emission trading scheme are that it allows the market to set the price and it allows the government to set long term emission targets. This gives industry more certainty. The downside is that it's very complex because we need to track all these permits and not all nations have the sophisticated systems in place to do so, so the 'property right' is at risk and business is therefore reluctant to invest.

The economist and Australian Reserve Bank Board Member, Professor Warwick McKibbin proposes a hybrid of the two. I'll leave the final decision to economists – but what is essential is that governments put a price signal on carbon by setting legally binding deep, but long range cuts. In doing so, we will create the economic climate for industry to construct long range investment plans to drive the technical innovation we need.

Australians want to be part of the solution to this global problem and have said repeatedly that we are prepared to pay a financial price to do so – a moral stand we should all be proud of. But the analysis I've presented to you today demonstrates just how small a price we need to pay - provided we act now. 2020 will be here and gone before you even know it and so might the stability of our climate system. What will hindsight tell us then?

Let me close by reiterating that the carbon pollution problem is fixable – it need be no more difficult than cleaning up air pollution in the 1960s, but we are taking staggeringly higher risks by delaying action. The sooner we put a price on carbon pollution in Australia, the sooner our engineers and scientists can help the world get on and fix the problem, and the sooner our industry can position our national economy to take advantage of this 21st century reality.

So I hope today, you will discover how your industry can make its contribution to the solution and I trust turn a nice profit in the process.