

**Speech Topic:** Garnaut Climate Change  
Review Update

**Compere:** John Quiggin, University of  
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## Transcript:

JOHN QUIGGIN; In the spirit of climate policy, I'm going to shift that entire cost onto future generations. So we have half an hour for this session and Ross will speak for twenty five minutes which will give us a little bit of time for - a little bit of time for some brief questions.

So I seem to be Ross' designated chairman. Perhaps owing to my performance at the Australian Economics Conference when the LaRouche guys turned up - I can't see any here - but I'll be advising people that only paid up delegates are going to get to ask questions at this session.

Unfortunately I don't have the great big Crown Security guy to wheel out. But I have been practising my karate moves. So no LaRouche guys please.

AUDIENCE; [Inaudible].

JOHN QUIGGIN; Good point; they have to have a badge. They have to have a badge and affiliation. That's right. So we shall see. But I don't...

So I was going to say as I did last time that Ross needs no introduction. But in fact maybe he does. Ross has made such a big contribution over the last few years to climate policy that maybe it's worth pointing out that he isn't somebody who's come out of environmental economics and been hired as an expert on this.

Ross has a great and distinguished career, and as one of Australia's leading trade economists came into this field as somebody I think without particular preconceptions about the policy issues; and rapidly was convinced both by the climate science and by the general case for the need for a price on carbon; and has been a very articulate and effective advocate of those things at least as I've mentioned in that part of the debate that's amenable to any kind of rational discussion at all.

So, I will just say it's been a huge asset to the debate I think to have somebody like Ross leading for the economists. It really has shown the economics profession - often sort of not seen well by environmentalists - it's really shown the economics profession in a very good light.

So I won't take up any more of future generation's time. I'll go straight to Ross.

ROSS GARNAUT; Thanks John.

Well as you've seen from the papers I haven't confined my remarks to areas where you can get rational discussion. I'll probably continue that today.

Just a couple of days ago on Tuesday night I released the eighth of the update papers, all of which are on the Review's website. The aim of those papers was to go over issues where early in the work my team and I had identified those areas in which things have changed. There's more information; there's been more analysis; there's been debate. We've done detailed papers on that. That's been a pretty heavy production process. We've had one out a week through February and March. That's done.

The stage I'm at now is to pull together the final report of the update of the Review, which I have to give to the Prime Minister by the end of May.

What I thought would be most useful today having just completed the eighth of the papers and put it out would be to run through some of the issues that have given rise to debate in the papers. Then we'll try - we'll keep a few minutes for you to bring up issues that I haven't brought out.

There've been important and interesting developments in the science since the paper that - since the Review was put to bed in the middle of 2008. Especially when you think that the Review is based mostly on the peer reviewed science as it existed in the middle of 2007 when the last IPCC report came out.

I surveyed all of that in the fifth of the papers released that very interesting forum down in Hobart. The main story there is a rather unhappy one of confirmation of the rising temperatures tracking pretty well as the mainstream science was suggesting they would; which was an unhappy conclusion.

Some of the other measurable parameters tracking at or above the high end of the range of possibilities that the mainstream science was suggesting; for example, sea level rises right at or above the high end of the range of possibilities that immediately send to mind thinking about professional reticence - scientific reticence. I had good discussions of that down in Hobart with people who are doing some of the work in Antarctica on that.

The recent science has confirmed more clearly the anthropogenic footprint on some particular major climatic events in a way that couldn't be done so unambiguously a few years ago. More of the mainstream science, the science that's made its way into the top peer review journals, is pointing to higher risks from given levels of increases in concentration of the atmosphere. So there's a bit more room for caution.

I cautioned in that paper against running too quickly to stronger conclusions about the science, saying that it's very important to ground our debate in the peer reviewed science; not to get ahead of ourselves, even though there were quite important publications lags. Because this is a hard enough discussion in the community anyway without moving beyond what the broad science has firmly established positions on.

So the reasons we're having this discussion have been confirmed and become a little bit stronger. There is a warming trend there in the data. Economists - which there are lots of good ones in this group - know that you test that with standard statistical techniques. Trevor Breusch tested it and it's there beyond reasonable doubt and the anthropogenic footprint is there with increasing clarity.

Another important development - and this was the subject of the paper I presented in the third of the papers - to the Agricultural and Resource Economics Association meeting down in Melbourne, earlier in the year in February; is that business as usual emissions have shown stronger momentum than one might have expected in the circumstances.

Since I gave my report, we've had the Great Crash of 2008 - well the Great Crash was in its early stages when I presented the report to Prime Minister Rudd. The morning I presented him the report, overnight we had the biggest one day points fall on the New York Stock Exchange in history. I think it was 717 points. Both the Prime Minister and the media's attention was pretty much on that when my report came out.

Well after that we went through the great recession. That has changed the environment for discussion of these matters in some pretty important ways. I went through some of those ways, not especially about climate policy. In fact, not at all about climate policy, but in my little book - my exercise in recovery from the climate change work - the book, *The Great Crash of 2008*, which was published in the middle of 2009.

I pointed out there that one very important, very long term consequence of the Great Crash was going to be a change - an acceleration - in some very important global geo-political trends. So there was, in the aftermath of the crash - and this was clear when I wrote the book in the middle of 2009 - there was going to be a long term deceleration of growth in the established industrial countries of the northern hemisphere, but no significant slowing of growth in the developing world.

And in the original report, one of the features that had received a lot of attention internationally was my working through the implications of what for half a dozen years I've been calling the

platinum age, the period of accelerated and more broadly based economic growth throughout the developing world that began early in this century, the shifting of modern economic growth into the populous heartlands of the big countries of Asia; China, India, Indonesia.

And in the long term and for our topic today just as importantly, the establishment of much stronger growth in other parts of the developing world, including some of the hardest parts where development hadn't been deeply rooted, like all of the African countries that are not currently the locus of large political problems, of political disorder.

So there'd been a bit of a deceleration of emissions growth, or a bit of a fall in the old industrial countries, but no sign of any fall in the places where most of the global emissions growth was happening anyway, the developing world. So the main message of that was that our challenge is a very large one, a daunting one, where the science said we've got to be more careful about the boundaries, and the global development economics said, well, we're racing with a lot of momentum towards those boundaries.

So they were a couple of sobering bits of background that came out of the early papers. We don't have a lot of capacity for the atmosphere to absorb more greenhouse gases without starting to take large risks. The global mitigation task is an urgent one.

The second of the papers focused on the international situation, and there the story is a complex one. The world has changed from that which I'd hoped for in my 2008 review, but not necessarily expected. I'd talked about the international policy problems being the central part of the diabolical policy problem. I talked about there being just a chance that humanity would avoid these very large and damaging consequences of modern economic growth.

But the best - that chance of doing things in what I said in my report was going to be the lowest cost way for the world as a whole has not materialised like that, but what has materialised is a wider base of effective action in individual countries. Not very well coordinated, but stronger action overall than the review anticipated.

And the big new development is the acceptance of rather strong emissions reductions targets below business as usual in the big developing countries. There was still a big ideological resistance to that in the developing countries after the Bali meeting, at and after. And when my report first came out and I said that we actually have to get away from that old binary world in which developing countries don't accept their constraints, not because that's fair, from most criteria it's not fair, but because we can't possibly solve this problem unless we do.

And I said in the 2008 review that China would have to accept large constraints on growth of emissions at a much earlier stage than any other country had concerned itself for these things. I said I expected this to be seen in China as being unfair, but it was actually necessary if the world was going to solve the problem.

And there was discussion of a predictable kind when that first came out in China. The report was published in Chinese by a China academic. Yes, there was much discussion. There was a lot of comment about how the particular model for allocating the burden of emissions reductions across countries was a difficult one for rapidly growing, developing countries.

Nevertheless, since then we've seen first China, and then other major developing countries accept major constraints, and they've shifted the trajectory of their emissions growth substantially below what I had written into the review. So China is doing more in reducing emissions than I had allocated to China responsibility for in my modified contraction and convergence allocations. And also very strong commitments in Indonesia.

And in some ways politically most surprising of all, India accepting constraints. Now, India's constraints are not as strong as the other big developing countries, but it's a major step for India to put aside its rather bolshie objections to a developing country with such low levels of emissions per capita - one twentieth of Australia's, they keep telling me, and they're roughly right - nevertheless to accept constraints at such an early stage of development. That's a very important development in India, and important for other countries.

But with the acceleration of modern economic growth in much more of the developing world, the boundary of concern has shifted. And unfair though it may be, we have to worry about emissions growth in other parts of the developing world which are now growing more strongly.

And we have to think about a global model for dealing with the problem that doesn't get in the way of the continuation of the wonderful process of accelerated economic growth that we've seen, for example in Africa, over the past decade.

On the international discussions there's been huge focus in Australia of the fiasco - the diplomatic fiasco at Copenhagen. And I must say at the time I contributed to that discussion. But one has to distinguish between the diplomatic fiasco, and what actually came out of it. And what came out of it was pretty inchoate at the time, but order was given to it at the subsequent meeting in Cancun in Mexico in December last year.

So if you look at the Copenhagen agreements, the Cancun agreements as one set of agreements, we've got out of that the commitment to limit to two degrees. We didn't have a commitment before roughly corresponding to 450 parts per million concentration in the atmosphere, which I'd recommended in the report, was a position that Australia should adopt as being in Australia's national interest, that had been taken by Australia to Copenhagen. So the outcome was consistent with that.

We had formalised the - we saw formalised the commitments made by the major developing countries. They're now there in the Cancun agreement. We saw major new developments on verification, and measurement of emissions. So we've got a base for international action. What we don't have is agreement in a form that can easily lead to cost reducing trade in international entitlements, and that's a challenge.

We've got a world in which a lot of action's taking place. We are bending the curve quite a lot from business as usual. Not enough to meet that two degrees objective, but we've made quite a significant start. That's being done in a way where there's not much international coherence, and rather difficult for individual countries to be able to compare what they're doing easily with others.

So I talked a lot in that paper about what's happening in the United States. In the United States, President Obama took a seventeen per cent reduction in emissions for 2005 to the meeting. That's equivalent in our terms to with a 2000 base to a sixteen per cent reduction. That has remained US policy, even though now, with the new format of the House of Representatives, there's no chance of an economy wide carbon price going through the congress for the time being, until the political constellation changes. There's a very strong commitment to it, to getting there through regulatory and other means at federal and state levels.

I've had detailed discussions with the Secretary for Energy Steven Chu and he's put a lot of emphasis on the work that they've done on modelling. The shadow carbon price, which they're running through all of their regulatory discussion related to water mobiles, to appliances, to buildings, to try and put some economic coherence into a much more active regulation regime. They're being helped by a gas revolution and new discoveries of domestic gas, mainly shale gas. There's no expectation that there'll be permitting of any new coal-based plants in the United States.

So if you ask me, I think that unless there's a further shift in US politics that the US will be heading towards those targets, those commitments. In China, there's been a fair bit of discussion in the last few days with the presence in Australia, including here yesterday of Xie Zhenhua, who's the Chinese official with main responsibilities for these things. I won't go into that any more now, except to underline the point that China, a couple of years ago, was not doing things for the reasons of reduction and emissions and now they're doing a lot. It's transformative, what they're doing.

So then we got onto the series of papers of what Australia does. A lot of interest on paper on land use, but I won't go into that now. That's been thoroughly discussed in other places and it's not so controversial. Uncertainties about numbers, but very large potential. The key is to provide adequate incentives to bring out that potential. I've suggested we provide those incentives by linking into the general carbon pricing scheme.

On carbon pricing, you've had a discussion of some of the issues this morning. I won't go over that. I'll just focus on a couple of points. A lot of the discussion since the carbon pricing paper is focused on the vexed question of emissions intensive trade exposed industries. This is a really hard and a really difficult question, but a really important one. If we don't get this right, we'll make a mess not only of climate change policy, we'll not only provide an excuse for

effectively exempting from emissions constraints many of our most emissions intensive industries, we'll see other countries doing the same thing.

We will seriously distort our own political economy. You will seriously distort the politics of our economic policy making. We saw through the chronic underperformance of the Australian economy for eight decades in the years of high protection how damaging that can be, and we'll make a mess of the global trading system. I think the stakes are that high. These issues are hard. The measurement issues are hard. But unless we put the resources into overcoming those issues, we're going to have big problems not only for climate mitigation. The world will be doing things on climate change and reducing emissions, whether or not we get this right. We'll make a mess of our domestic political economy and make a mess of the global trading system.

I set out a pathway that I think can get things right. Basically accepting, with a couple of modifications - well, one small scaling back - the government's emissions intensive trade-exposed sectors from the CPRS for the first three years. Not because I think it's ideal but because it allows things to get started. But it is crucial that there be a point at which that stops and you have a thorough review and economical rational base is implemented from there on. I've made some suggestions, there's been discussion of that, I can come back if there's interest.

The paper on innovation hasn't been particularly controversial, but I think those issues are crucial. We need more investment in research, development and commercialisation of new technologies. It has to be supported by the public finances that should have a major claim on the revenues from the carbon price. Then this week, electricity, which has been an interesting discussion - you hear a lot about how these are the - this is the worst possible time to be introducing a carbon price because Australians are under such economic stress at the moment.

Our average incomes at the moment are about twenty per cent higher than the United States. Our average incomes, GNI divided by population were about eighty-five per cent of the United States in the mid 80s. Maybe that would have been a less stressful time. But why it's stressful is that a lot of costs have been rising and electricity is one of those. With my team I started digging into that question. My original purpose was to put in perspective the carbon prices. Such very big increases in electricity prices anyway, I wanted to explain that what comes from the carbon pricing is just a bit of that. But the further I dug into it, the more I wondered about whether the ongoing electricity prices should be happening at all.

Now, that's the comments I made on that, the analysis I put into the paper released two days ago, has drawn a lot of comments. A lot in this morning's paper again. So it wasn't a one-day wonder. The first thing I'd like to say about all of that discussion is I think it's terrific that at last we've got a transparent discussion of these things.

For a long time in Australia, these sorts of issues, with immense implications for the Australian standard of living, have been handled only by the people very directly involved without transparent analysis, without a need to discuss, in a public way, the reasons why some very important policy decisions are implemented. Well, we've got that transparent discussion now and I think the issues are so important that the community will make sure that that transparent discussion is taken through to a satisfactory conclusion.

The large emitting companies are aggrieved because this time, they have to make their case for special treatment in a public way. But I'm afraid I don't apologise for that. There have been some interesting public exchanges in the last couple of days. A political writer in The Australian made much of a claim by a manager of a state government controlled company in the regulated part of the electricity industry, claimed that I knew nothing about business. Well, I know a little bit about it. I chaired for 15 years a company that started very small and then operated in the world's most competitive market, listed on four international stock exchanges and ended up in the top twenty in market capitalisation of Australia when I moved on last year.

Yesterday's comment by the Deputy Leader of the Greens Christine Milne opposed my recommendation on phasing out the renewable energy target as the carbon price rose. Yet today's editorial in The Australian criticises my paper for not saying anything about the phasing out of the renewable energy target in the process of introducing a price on carbon. Well, Christine Milne read paper number eight more carefully than the editor of The Australian. The head of the energy producers association, a lobby group representing the generators and networks, said in this morning's paper that my work was of undergraduate standard. Well, if

he'd been taught well as an undergraduate, he would have been taught the article by Averch and Johnson in the American Economic Review, a long time ago, which tells you that if you have regulated prices based on regulated rates of return and the regulated rates of return exceeds the supply of investment, you'll get wasteful over-investment and excessively high prices.

Well I think that might be a reasonable point on which to...

JOHN QUIGGAN; Thank you very much, Ross. I think we might just take three or four questions and then - brief ones please - and then we're going to give Ross a chance to reply. Is there one there?

AUDIENCE MEMBER: My name's [inaudible]. Now, your paper on developing innovation [inaudible] last week seems to take for granted that the [inaudible] will necessarily increase innovation. Now the empirical literature seems to be divided on this issue, it's fairly ambiguous.

It seems to depend on how substitutable new technologies are with carbon. The little bit of empirical literature that's there seems to suggest that, you know, a carbon price will actually stifle innovation, because you're decreasing total profits, that will discourage innovation in new energy efficient technologies.

I'm just wondering what - if you had any comments about that and whether we should be taking that - a carbon price and encouraging [inaudible] those for granted in the policy making.

JOHN QUIGGAN; Yep.

AUDIENCE MEMBER: Mr Garnaut, members of the Coalition have fairly publicly labelled you as taking sides on this debate. Do you see that your role in this debate has recently changed or would you challenge that view [inaudible]?

AUDIENCE MEMBER: A bedrock, if not the bedrock, classification for renewable energy target, and indeed is the case with say feed in tariffs in Europe, is that they can bring forward cost reductions in low emissions technology, to secure renewable [inaudible] and therefore introduce dynamic efficiency in emission reduction. Your low emission technology innovation package didn't really discuss that, can you tell me why?

JOHN QUIGGAN; We've got another question.

JOURNALIST: The Australian energy regulator said yesterday, told me yesterday that they have, they're already doing a review into the regulation of the transmission and network sector and the electricity industry, but that the code regulations will continue until 2014 and there's no way of changing them or changing the flowthrough to consumer prices until then.

What do you think about that and is there a way that you can see that politicians could kind of superimpose themselves on that [inaudible]?

JOHN QUIGGAN; Okay, we'll take the responses.

ROSS GARNAUT: Okay, thanks, John and I'm glad there's a couple of questions on innovation because I hardly touched upon that. I'll deal with those two questions first. I didn't say that the carbon price is all that's necessary for innovation. In fact the paper said that carbon price will be an incentive for innovation. That's a view I didn't think I'd have to defend.

You actually make the investment in a lower emissions technology more profitable through innovation, as all the work of [inaudible] and agricultural economics in the '60s showed us, the rate of return on innovation is very closely related to investment in innovation.

Put another way necessity is the mother of invention and the increased returns for innovation is a nurturing mother. But I put quite a lot of emphasis as well on the reality that you won't get enough investment in innovation if you rely on the carbon price alone.

That's why I said it was essential to have the public support for research, development and commercialisation of the new technologies. In fact, that's mostly what that paper is all about.

That's not as readily accepted as it might be and one reason is that we have examples of policies for using public money to encourage innovation because they've been flawed in the way they've been administered, haven't produced good results.

Well, you have to do it right and we put quite a lot of emphasis in that paper on getting the governance arrangements right. But fiscal support funded out of the carbon pricing for innovation is going to be necessary to correct the external benefits of innovation which lead to under-investment if you rely only on the carbon price and activities in private markets.

Then the question on the renewable energy targets, bringing forward cost reductions, I actually think that the renewable energy target is pretty awful as a way of encouraging innovation.

What it does is encourage renewable energy in a way that gives all the encouragement to the lowest cost renewable energy, which is wind, and I think you'd be drawing a long bow to say that in this rather mature technology or mature technology elsewhere in the world, Australia doing a lot more of it will actually through innovation reduce costs.

We talk a lot about how scale of activity and experience with activity brings down the costs of new technologies. The case - the economic case for public subsidy is a case for compensating for the external benefit of innovation and that's what I focused on in the paper. That should lead to not only to support for pure research and development on new technologies, where Australia has comparative advantage in research and a national interest in the success of the technology, but also in the first introduction of an overseas technology into Australia where there are externalities at play. So I see the issue that you raise as being most efficiently handled through well directed support for - fiscal support for innovation.

Steve's question on policy or politics and do we hold out for the first best. Well, this is always a dilemma in the policy space. Unfortunately with mitigation policy the early papers showed that we don't have much time left. One would need to see fatal flaws in the path in which we're headed to give up the chance of making progress that might lead to better progress later. Certainly I think that the diabolical problem of international cooperation is so great that it's not worth giving a thought to starting again. This was a point made in the original paper and there's some implications of that. If I'd sat down at Rio de Janeiro in 1992 and especially knowing what I know now, some things I would have designed differently. Most importantly I wouldn't have allowed that distinction between developed and developing countries. I would have put it on some other basis that automatically phased out over time. But we're getting rid of that through a painful process between Copenhagen and Cancun and we've been getting rid of that distinction. The biggest flaw is being corrected.

Should the world have started by counting emissions, accounting for them on a production basis in the country in which the emissions are generated, rather than on a consumption basis? Well, it could have gone either way and in my mind if you'd been taking a new decision at the beginning there'd be no more in it than a decision to drive on the left or right hand side of the road. But we're driving on the right hand side of the road, the American side of the road, where the Philippines ever since cars were invented had driven on the Australian side of the road. But when General MacArthur returned and all of his trucks and lorries and tanks went on the American side of the road within a few hours, the Philippines drove on the American side of the road. It would just be too hard to change it all. We've got a production based system. You can argue about whether we should have got there. That's something for historians and philosophers, but I think we've got to make this system work.

An implication of that is we've got to find a workable way of handling trade exposed emissions in terms of industries. There will need to be an international approach for that. I had some interesting discussions with Pascal Lamy when my first report came out at his initiative talking about the approach I'd suggested in box 14.5, in chapter 14 of the original report. It's hard to make work. It'll be much easier to make work if we can do that through an international body, the WTO. OECD is technically equipped for it but unfortunately it's a developed country group. How exactly we do it internationally we don't know, but in the meantime the more we can make a start in Australia, the better. And in this particular field of sorting out the international trade rules, Australia's made big contributions, analytic contributions. We've sorted out the ideas of effective protection of some of the basic approaches to trade negotiations that have been successful. I think we've got an intellectual contribution to make. We can make a start on our own. We'll need an independent organisation to do it of high standing, high professional

standing. We worked towards that being internationalised at one stage but we make a start here to begin with.

Finally, not everyone in the Coalition has accused me of taking sides. But when one of them did, a very senior figure in the Opposition very recently and who was gracious enough to say that I'd been meticulous in avoiding that in three or four years of public debate, but that in one TV program a week or so I strayed beyond the line, I said to him I strayed beyond the line by repeating policy positions that we both shared three years ago. To which he responded yes, I suppose everyone has changed except Malcolm.

- ENDS -

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