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Compere:

Speakers: Professor Ross Garnaut, head of the Garnaut Climate Change Review

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ROSS GARNAUT: I was commissioned late last year to do an update of the review, taking into account developments since we completed the work for the main review, the earlier review, in the middle of 2008, and we began work in November and identified eight areas in which it seemed to be worthwhile updating analysis. You've got before you a list of the papers that we'll be putting out between now and the end of March on that and then I'll bring all of that together in a new report by the end of May. Alongside this work, I'm an independent expert member of the multi-party committee; that is a separate job although, of course, this work will feed in through me into the multi-party committee. Today's paper really sets the scene for the work over the next couple of months and the heart of the paper that I'll be releasing this evening is a review of the analytic framework that I used in the review in 2008. It was an explicit framework, a transparent one. It was also an innovative framework because no one had quite done this job analytically before of assessing the costs and benefits of mitigation in the case of one country. It's a very different job to that which was undertaken by Klein in the '90s, Nordhaus, Stern in 2007 who sought to assess the costs and benefits of mitigation for the world as a whole. My review assessed the costs and benefits for Australia, one country, and it turned out that that was a harder job than working out costs and benefits for the world as a whole because you still had to look at the impacts on the global economy and society and then had to examine Australia's interaction with the rest of the world through that process. And, amongst other things, we had to develop a framework for assessing Australia's proportionate contribution to a global effort. All that work was done. They – the framework was transparent; I hope clear. There was relatively little discussion of the analytic framework when the report came out. There were some explicit or implicit criticism of bits and pieces of it, but it was much more common, rather than addressing the logic of the framework, for people to take a view on conclusions and recommendations. They either liked them or they didn't like them. I would like to have one

more shot at getting people to address how I came to conclusions, the logic of the case, the information on which it's based, the premises from which I worked. And so, by laying it all out in this first paper, I'm providing an opportunity for people who don't like the conclusions to work out whether there's any logic in their positions by finding what's wrong with my premises or logic or information. I hope that I can have that sort of discussion with people who didn't like conclusions last time around. For the report, the review in 2008 had a life of its own and its part of the Australian and international discussion. What we're doing from now on is looking back over the work that was done then and asking, "What changed? Is there anything that I should review – look at differently in the analytic framework? Is there anything that's changed in the international situation that should change any of our conclusions or our approach?" Now, lots of things have changed in the international situation and the next paper will be about that change. On Monday, I'll be addressing the Lowy Institute in Sydney with links, I think, going to all of the groups in all of the State capitals to release our assessment of the international situation. Now, just to briefly summarise that and the work I've done over the last few months and since Cancun and the intensive meetings that Steven – Steven Kennedy and I – Steven is head of the secretariat – and I had in Beijing and Washington over the last few weeks has led me to the view that we don't have the agreement that we were – that many of us were hoping for as a result of Copenhagen and Cancun, but we do have an international agreement. In many ways it's an agreement that's more likely to lead to substantial results, and some countries are already acting on that very strongly. That's the subject of the paper that will be released on Monday. The third paper to come out will be an examination of emissions trends, both over the last few years and into the future. You might recall that one of the innovative features, one of the contributions to the international discussion of the 2008 review, was that we reworked expectations of businesses' usual emissions growth, especially from the big developing countries, and we came to the view that the international community had been kidding itself. And the publication then of that – of the review and some supporting documentation in academic journals did contribute to a reassessment of business-as-usual emissions and what emissions would do in the absence of mitigation. And that was all an upward reassessment because the IPCC, the International Energy Agency – Stern using the IPCC results had, had underestimated, by a considerable extent, the growth of the big developing economies – China, but not only China; India, Indonesia – the energy intensity of that growth and

the emissions intensity of the energy that would be used under business-as-usual. So that made the global task larger and more urgent, and that analysis from 2008 has gradually been absorbed into the international thinking, and there's been quite a movement in that direction; for example, in the work of the International Energy Agency that was published as a world energy outlook late last year. Now, lots of things have happened to affect the outlook for emissions growth over these last three years. We've had, in that time, the global financial crisis which not only led to the largest recession in the developed countries that the world has had since the '30s but, in my judgment, put the established developed countries in the Northern Hemisphere onto a lower growth trajectory for a long time. So that saved us some emissions growth, unfortunately not that much, and a much bigger story is how the very rapid emergence from crisis and establishment of even stronger growth rates in the big developing countries has confirmed that what I called "the platinum age" – the early 21st century tendency for there to be exceptionally strong growth and sustained growth in the developing world – first of all the big developing countries led by China but not only them, and extending even to poorer parts of the world like Africa – that this had deep roots. It wasn't knocked off course, even by the global financial crisis. So the third paper will work through the implications of that. The fourth paper will focus on transforming rural land use. You might recall chapter 22 of the review, which talked rather speculatively about the very large potential in Australia for biosequestration in various forms. It went through those various forms. It included different ways of managing Australia's extensive woodlands. This was a big issue for Australia because, per capita, we've got far more woodland than any other developed country. The difference is very large and so a very great opportunity. So we'll have one paper that reviews the considerable work that has been done in the last few years in this area, quite a lot of it spurred by the speculative material that I put in to chapter 22 and taken a lot further by CSIRO, Queensland Department of Agriculture and other groups. The fifth paper will update the science of climate change. Now, the IPCC moves in periodic jumps. The major reports, the major assessments come out now and again. There've been four of them. There will be another one in a couple of years. But science keeps on coming out. The IPCC reports and assessments are a means that the international community has settled on to try to integrate, to bring together the science, but it's a long way out of date and the latest IPCC assessment that I had to work on had come out in 2007, which meant that the peer-reviewed science wouldn't really work that had been done by about

2005. So in the update of the science, we're trying to look at the peer-reviewed literature to form views on what has happened since then. It's a pretty interesting story, a pretty sad one. I think the general tendency is to confirm the IPCC underestimated impacts. All of the measurable impacts, like increases in temperature, increases in sea level are tracking right at the top of the range of possibilities identified by the IPCC or, in some cases, above them. There's increasing evidence now appearing in the peer-reviewed literature that what was once good physics is starting to appear in the empirical science – an intensification of extreme weather events – so the update of the science will try to bring the scientific developments over the last five years into account. And I don't think there's any major area – that is a very sad thing, an unfortunate thing – but I don't think there's any major area where, unfortunately, sceptical views of the science can draw any strength from the peer-reviewed science, the real science, that's been done in the past five years. All of the new evidence seems to be in the other direction. I wish that were not so. The sixth paper will focus on what a lot of people will see as the central issue, the approach to carbon pricing and reducing Australia's emissions. There was a lot about this in the original review; you'll be familiar with it. The Australian debate has advanced a lot since then, and the update has to take account of that development of the Australian debate, and we'll put that in the context of what we are learning in the other update papers, and what we are learning about developments in the international situation in the science, in emissions trends and so on. The seventh paper – and we thought there was a logical sequence going from carbon pricing and reducing Australia's emissions, which will be the centrepiece of Australia's mitigation effort – a logical sequence from that to looking at developments in low-emissions technology, how the incentives that are provided by carbon pricing will affect the choice of technologies. We'll review what the review had said about innovation policy. I must say that, while the government accepted many elements of my earlier recommendations, one that didn't get much traction at the time was the strong view that I put that there needed to be support for innovation, for research development and commercialisation of new technologies developed in Australia. And, in the earlier review, I'd seen a significant part of the revenue for that coming from sale of permits. This paper, number 7, will review my thinking on innovation policy and support for innovation. There're lots of opportunities for low-emissions technology in Australia. In fact, when you start to look at it, we're a world champion in the low-emissions technology potential, just as we're a world champion for the fossil

fuels, and that's true right across the range of low-emissions energy technologies, whether you're talking about nuclear, marine, power wind and waves, solar, biosequestration – where some of the most exciting opportunities are in algae where what you need is lots of clear sunlight and a saline environment and we've got plenty of both – also wind resources across southern Australia and the Tasmanian west coast; there's wind resources that they don't have much better in the world. And we happen to have very large natural endowments of some of the crucial inputs into the low-technology industries. For example, we're the world's major source of high-grade uranium oxide, as nuclear power becomes more important in the rest of the world. And a new one with electrification of transport, which is developing huge momentum in the Northern Hemisphere, anxieties are developing about some of the rare earth metals. But take away China and we seem to have as good a potential for developing this industry as any other. So innovation policy in Australia has to take into account how we bring on some of these opportunities. And one of the things we'll do in this paper is compare the assumptions that were made in the very extensive modelling that the review did, and then the review did jointly with Treasury later on, on the costs of mitigation. And they're very detailed assumptions there, assumptions going forward for 40 years, and in the joint work with Treasury for 90 years, and now the review's own work on assumptions about rates of technological change, reductions in the costs of the new technology. So one of the things that we're doing – and Steven and my visit to China and the US was very much focused on this – is looking at what is happening to the costs of the low-emissions technologies. And here, the general story seems to be a very positive one. The costs are coming down a good deal faster than we had assumed in the modelling for the review. But, in this paper number 7, we'll go systematically through that. And finally what some people see as the politically-hardest corner of this issue at the moment, the electricity sector, we'll – the last of the papers that we'll put out late in March will focus specifically on the challenge to the electricity sector, the transformation that it has to go through. There was a chapter in the review on the electricity transformation or the energy transformation. This will update that, look in more detail at some of the challenges in the electricity sector. In the 2008 review I foreshadowed that electricity prices were going to rise quite a lot in Australia, even without taking into account anything to do with mitigation, and I set out in the review a number of reasons why that was the case. One was the effect on capital costs of the resources boom because it's the same sort of inputs, the same sort of skills,

the same sort of equipment that are required for electricity generation as for the general resources boom. So Australians were going to pay more for electricity because of the resources boom. One particular aspect of the resources boom – look, the price of coal has risen about – well, at the time of the review about five times in half a dozen years; it's more than that now. Depending on the exact direction of the cyclone there could be more still. But the price of – when the price of coal rises the price of coal-based electricity generation rises in some parts of Australia – in New South Wales, Queensland – not in Victoria where the coal is not tradeable, but anywhere that there's tradeable coal generators compete with exports. So electricity prices go up more, the more the coal industry is getting for its exports, and I pointed that out in the review. A third reason for expecting big increases in electricity prices was, again, a dimension of the resources boom – the great good fortune that we've had in realising we've got a resource base for an export base – the gas industry in eastern Australia. But that would internationalise the eastern Australian gas market, and so Western Australians pay much more for gas and electricity than eastern Australians because gas is exported from Western Australia and domestic users have to compete with exports. Well, New South Wales, Victoria, South Australia, Queensland have had a free kick from not having to compete with exports. But now the development of the coal gas methane industry means that gas prices can be expected to rise. So I set all of this out in the original report. Well, the increases in generation costs have proceeded pretty much as anticipated three years ago, although some people seem to have been surprised by them and talk about them as if it's something new. All of that was set out in detail in the electricity chapter of my report. There's some additional factors: big increases in costs of transmission which seem to be even bigger than the costs of generation, and we're putting a fair bit of work into analysing how much of that is necessary, inevitable, and how much might be the result of poor policy. So that will be the subject of some analysis in that paper – transforming the electricity sector. So, I'll just make a couple of points briefly on the additional content of update paper 1 related to the framework. I take up five issues in particular, which have been the subject of some discussion. One is the discount rate that's used for comparing welfare in the future and welfare now. It's a pretty arcane thing, it glazes most people's eyes, but it actually matters quite a lot. When I talked a bit about the framework that I'd be using to my colleagues in the multi-party committee, I mentioned that, if you use an equity discount rate, which is a discount rate that embodies lots of equity risks and, therefore, is

not appropriate for this type of exercise – but if you use that sort of discount rate then, even if the human race were extinct as a result of a failure of mitigation in half a century's time, you would still not mitigate because that wouldn't show up as real value in the calculations, whereupon the Prime Minister, with good humour, said, "Well, you've got us there, Ross. We're against the extinction of the species." But that just illustrates how what seems to be an arcane issue actually has quite large consequences. I've gone again through the logic of choice of discount rates. Some of the criticism that appeared of my use of discount rates seems not to have been based actually on a reading of my review. Some of it seemed to have been a rehashing of a criticism that had been made of Stern, and I actually used a different approach to Stern. But such is the Australian cringe that we get that sort of thing. So, really, I'm asking people to read what I actually wrote. I've gone over that again here. I used a range of discount rates and it turns out that, within the relevant and defensible range of discount rates, the choice of discount rate does not materially alter the conclusion for Australia. That might not be the same conclusion for all countries, but it's the conclusion that's relevant for Australia. I also take up the issue of how you consider uncertainty. There's been a bit of an element in the Australian discussion that says, "Oh, well, the science is uncertain so we should wait," or, "The science is uncertain so we should do a bit less in mitigation than we otherwise would." When you look analytically at uncertainty then, actually, the presence of uncertainty increases the urgency and the strength of the case for mitigation because, if you had a certain outcome, if you were certain that climate change was going to cause X dollars of damage, then that will be one thing. But if you've got a range of possibilities and the average of those is X dollars but some of the possibilities are much better and much worse, and that's what uncertainty is – it's a probability distribution around an average outcome – then those worse outcomes are things that we usually are prepared to insure against. We pay more for insurance than we would pay for the certain expected value of what we're insuring. So the presence of uncertainty strengthens the case for mitigation and makes it more urgent. That's a confusion in part of the Australian discussion is one I try to clear up in this paper and I hope you'll take some interest in it. The third issue, a particular issue, I take up is one that's sometimes raised that, "Why should developing countries join in mitigation? They're poor. It will slow their growth." Well, so they are, and I don't think many Australians have been more deeply involved in discussion of the global development question than me over the last half century, but the

framework, the analytic framework, of the review took that into account. It took that into account by seeking to come up with an allocation of mitigation responsibilities and obligations that was consistent with continued growth in developing countries so that, if each developing country did its own calculations like I'm doing for Australia on whether it was worthwhile, China and India and Indonesia joining in a global mitigation effort, then taking into account the whole international framework of mitigation, they would come to the conclusion that it was worth their while. Now, there are questions of judgment about how they will look at these things. There's been very interesting feedback and discussion on my approach, particularly from India and China, since the review came out, but I think the approach of the review has been demonstrated to be a robust one. The fourth issue I take up in the update paper is a question that's raised about, "Well, why should we do anything? We're only 1.4 per cent of global emissions. Whether or not we do something will not determine the outcome." I note in passing that that's not how we usually look at international situations. Whether or not we send troops to Afghanistan actually will not determine the outcome of Afghanistan. But we don't look at things in that way. We think in terms of making a proportionate effort to a collective goal that we share with other countries. So people who put that view are really logically taking a view against how we look at strategic policy, international relations, defence. They're entitled to do that, but not many people would take that approach to the logical conclusion. But, more importantly, this is a really hard international issue. Developed countries are seen by developing countries and by lots of thoughtful people in developed countries as the countries that have got the world into the position it's in at the moment. The per capita emissions are very high compared with other countries. The whole international discussion has been based on developed countries taking some steps first. And I formed the view that to get the whole world to act on this question – all of the developed countries would have to do their proportionate part. I wasn't suggesting that Australia should do more than its proportionate part but if one of the rich countries doesn't do its proportionate part, then we've got buckley's of getting the whole world to participate. Now Australia's position is particularly poignant. You'll see in the international paper on Monday, I reproduced a chart from the latest World Development Report from the World Bank and it's got all the global emissions and their ranked from left to right on bases of per capita emissions - there we are proudly right up the top, world champions and not by a little bit but by - now by a large margin because our emissions have

kept on growing when even the United States has eased off in the last few years. So for that world champion of high per capita emissions not to do its proportionate part, not to do its share in an international effort would be deeply subversive to that international effort. And let's be clear, we were deeply subversive, we have been deeply subversive to the international effort from time to time over the last decade. And what I'm asking Australians to do is to consider to stop being a drag on the international effort. We've got a bigger interest in successful global mitigation than any other country for reasons I set out at length in the original review. We've got more to lose from a failure of mitigation than any other developed country. We're the world's, the developed world's, largest emitter of greenhouse gases. It is a really strange position for any Australian to adopt that we should not be prepared to do our proportionate part in a global effort that will bring more benefits to us than any other developed country. And finally, the fifth issue I take up in the paper is some comments that have been made, "Well really it's too late, the world's going to fail. We've already - we're already seeing the costs of climate change; it's all going to get worse. We should put all of our effort into adaptation." Now I'm not against big efforts on adaptation. We will be making big expenditures on adaptation, we already have. That's what desalination is about, that's what expensive response to extreme events is about. We will be forced to make big investment in adaptation. And if we're clever we'll anticipate some of that and it will be cheaper to make some investments in advance rather than rescue situations after catastrophes have occurred. But I can't see the logic of saying there's a choice between adaptation and mitigation. Even though it is true that we do face substantial costs of global warming now through things that have already happened now because the world did not act early enough, we did not encourage the world to act early enough. There will be substantial costs. Nevertheless, the difference between a two degrees of warming and a three or a three and a four or a four and five are very large, will turn out to be very large even in relation to the sorts of costs of adaptation that we're already contemplating. So we've got to make investments in adaptation but that will not in any way weaken the importance of doing our proportionate part in minimising the global damage from climate change. So questions.

QUESTION: Professor, you- I sort of feel like...

CHAIR: Could you just introduce yourself.

PAUL HUDSON; Paul Hudson from the Herald Sun. And given the past month that we've had with floods and cyclones and everything else and you said a couple of times in your opening comments there that we've been having an intensification of extreme weather effects - what we've been seeing in the past month, how do you characterise that and do you - where do you stand in the spectrum of views with those sorts of things are caused by climate change, are preventable - what's your view on all of that?

ROSS GARNAUT: Well, first thing is I'm not a climate scientist. But I've in the last year - few years since I was given my first commission I've tried to read and understand climate science. I've made no contribution myself to climate science; I've got - I've tried to understand what the climate science is saying. One can think of - well, there is a general story of warming of the world intensifying extreme events. That is - that's written deeply into the literature. I suppose the Australian expert on that is Amanda Lynch down at Monash, CSIRO, has done a lot of work on this. The IPCC wrote about that. If there is warming, then warming will intensify extreme events. I don't think that serious people anymore doubt that there is warming, that's been statistically demonstrated. The scientific evidence is very strong, that there's a human footprint in that warming. If the warming has happened there's a lot of scientific literature that says that a warming environment will be associated with an intensification of extreme events. Now different types of events will be affected in different ways. In Australia one of the extreme events that from time to time throughout our history that has caused trauma is bushfire. Well, bushfire is affected by the temperature in the ambient environment, by the strength of winds. The specialists on bushfire in Australia have done some serious work on that. And if you've got a rise in average temperatures, which is what global warming is all about, then there'll be a higher proportion of days that take you into that trend territory where you're very vulnerable to bushfires and the hot days are likely to be hotter. The extremes will be hotter - I think that's pretty straightforward. Cyclonic events - I've tried to keep up with the literature there again, emphasising I don't pretend to be an expert in the climate science; I try to read it. There's never been a strong assertion in the climate science that you'll get more frequent cyclonic events. There is a strong element in the climate science that you will get more frequent extreme cyclonic events. And I'm more familiar with economics but in economics we have some theory, we have some modelling and we have some statistical

analysis of what's actually happened. Well the theory might be Keynes's demonstration that increased demand in certain conditions will increase employment. You need modelling because the real world contains lots of cross currents and the modelling tries to bring all of these cross currents into account, so you don't just take the simple theory, the one factor that Keynes identified, you try to take into account all the interacting things. And then statistical analysis can tell you what did affect after it's all happened and you can be much more confident after it's happened. Well I've noticed in the climate science a similar range of activities. There's the fewer - there's the theory, which is the physics, which is very old. Now the theory of global warming has stood up pretty well. It goes back to the 19th century. It began with investigation of why this planet does have temperatures that can support life on earth, when one would not, when one would expect it to be some of the time too hot and some of the time too cold. And it's the presence of greenhouse gases in the atmosphere that create an environment in which there could be our kind of life on this earth. That's all there in the physics. Now the physics tells you that a warmer climate system has more energy in it and has more water in it. You absorb more water, the higher energy will be associated with stronger winds and of course the winds will contain more rain. So that's what the physics says. Well the climate modelling trying to take lots of factors in to account says, "Well it does depend on its interaction with other weather systems." In eastern Australia for example we've always, since it was identified by Jevons in the Melbourne Meteorological Bureau in the 1850s. The El Nino La Nina interaction is long been known to be very powerful in determination of weather in Australia. So you've got to take into account the interaction of some of these other climate factors with the physics of the association of energy in the system with the strength of cyclones. The models confirm that it's likely that you will get higher frequency of extreme events, not necessarily more of them. Now you can't trust a climate model any more than you can trust an economic model and so you do depend on, eventually, on verifying the model by what has happened in reality. Now good statistics requires a lot of observations before you can be statistically confident that a certain association between variables – in this case between warming and intensification of cyclones has a valid basis. That's what statistics - scientific statistics is about. Incidentally I use scientific statistics to demonstrate that it was a warming trend that was not changed by anything that had happened in the last decade in my review, expecting that to end the argument but some people at that time didn't understand the statistics. But the case - that case doesn't seem to be challenged much anymore. But

anyway looking at the statistical evidence, there's a recent paper in Nature, the science journal that says that since the 1970s, which is a period of acceleration of warming in the world as a whole and a disproportionate number of the observations are in the north Atlantic because there are a lot more observation going on, a lot more cities, a lot more data, but there has been a significant intensification of extreme cyclonic events since the 1970s. And now if we just - you need a lot more cyclones than we get in Australia in 30 years to have the same confidence, statistical confidence for Australia, but there's no reason to think that the physics will work differently in Australian air than in north Atlantic air or north Pacific air. And so you've got the physics pointing in that direction, you've got the models tending in that direction and the one set of data where there are enough observations to draw strong scientific statistical conclusions confirming that data, so reading the science as a non-scientist I would say that the odds seem to favour the proposition that cyclonic events will be more intense in a hotter world. And just bear in mind one other thing; if this is the case, bear in mind that we're just at the beginning of the warming process. The warming since pre industrial times is less than one degree. It's been hotter every decade since the '70s, but it all adds - that and the earlier warming is less than one degree. The science says that without mitigation and with the sorts of emissions growth that my analysis shows it will follow from the industrialisation of China, India, Indonesia, the acceleration of economic growth in Africa then that first degree is just the beginning. And so if we are, if we are seeing an intensification of extreme weather events now, you ain't seen nothing yet.

QUESTION:

Do you think that you're going to, in broad terms, have to revise your assessment of Australia's proportionate contribution given what the science is saying over the last few years about the total size of the task and given what other countries are doing and what we know about that over the last few years?

ROSS GARNAUT:

You'll recall when I analysed Australia's part, I didn't simply work out what Australia's proportionate part would be. I said we should say we're prepared to do our proportionate part if the rest of the world is doing that. If the rest of the world is doing less, we should do our proportionate part but it should be less. And just to remind you I said that our proportionate part by 2020, if the world is headed for a very strong degree of mitigation trying to keep the world at two degrees increase in temperature, then our part would be minus 25% by

2020. But I said if the world is not being so ambitious, if there's no appetite for that in the rest of the world and the world's heading towards instead 450 parts per million of greenhouse gases which would have corresponded roughly to the two degrees, if it's headed for only the 550 we should offer to do our proportionate part which would be more like minus 10%. And if there's no international agreement whatsoever, we shouldn't just give up. We should do something unconditionally. We should do minus five per cent. So that was the framework, I wasn't saying that we should do our proportionate, what would be our proportionate part no matter what others were doing. I said we should offer to do our proportionate part in a strong agreement and the government accepted that advice, the opposition accepted that advice. But if the world is not heading in that direction, we should make sure we're not a drag and I'm doing a lot of arithmetic on what that proportionate part might be.

QUESTION: So do you think you will change the - is it likely that you will revise your assessment of Australia's contribution in a relative circumstances?

ROSS GARNAUT: Bit early to tell, a lot of work is going on. But I should mention one other thing here. Here we're talking about 2020. And there's a lot of years between 2010 and 2020 and Australia's incurred - placing a lot of cost to the future on itself by not making a start. So making a start with a carbon price, reminding people of where we've got to end up but making a start with something that won't get us all the way in one step is still a step forward. And that's something that will be very clearly in my mind.

LAURA TINGLE:
Journalist for the
Australian Financial
Review

When you're reviewing carbon pricing and what Australia does about it, will that be looking at not so much the political debate but the proposals that have come forth since your review both in terms of the, in terms of legislation and other models like the consumption model and take into account all these other factors that have been changing at a global level, will you assess those? Or will you still be looking at essentially the model that you put up and assessing all of the international changes against that or that against of the international changes?

ROSS GARNAUT: Yeah, Laura, a lot of the - those alternative approaches were already on the table and I considered them, but I'm having another look at them. But the developments in the Australian debate are relevant to policy. One thing that's tremendously important to success in this area of policy is stability in policy, in confidence that it will endure. So you need to be sure that the policy is based

on very, not only on very strong logic, but logic that is understood by enough of the relevant community to endure. Now that doesn't mean to say that everyone has to agree with it at once. There's a romantic view around now that the big reforms, the bit structural reforms of the '80s all had unanimous support of an opposition and so on – well there was after they happened. And it would be amazing if that was not the case with this one that the judgement has to be what is likely to win such broad community support that it will endure once it's in place. I suppose they're two hurdles. One getting through the various elements of the political community that have to support it into legislation and then a judgement has to be made about what is likely to endure once it's in place. So it would be, it's incumbent upon me to think through all of those things and in that carbon pricing paper – fortunately still another six weeks to work on it, I'll be trying to do that.

QUESTION:

In general terms are you still – it seems to me the government is warming to the idea of starting with a carbon price and then some sort of cap on trade of ETS, CPRS system – is that still your kind of favoured view on that?

ROSS GARNAUT:

Well in my original report, it was my view that that was the way to go if the international discussion did not give us a strong basis for deep international trade in entitlements. That was the way to start it – in my original review. And all I'm doing here I'm not saying what I'm going to recommend, I'm talking about what was in the original review. I said in those circumstances it would be wise to legislate the institution of the ETS so an emitter still has to buy a permit and acquit that so you've got the system working, but you fix the price. And so in some ways that works like a carbon tax and then once there are opportunities for deep international trade, once we've got a stronger international framework then you float the price and the system works as a trading system. I thought a fair bit before putting that in the report last time, so I can't pretend that I still don't see some advantages in it. But the fact that I recommended it last time doesn't stop me from looking at alternatives.

QUESTION:

But it would be fair to say that there is a deep international trading permit with pre conditions for that option is there, right?

ROSS GARNAUT:

That's quite a fair thing to say.

QUESTION: And so given the way the international discussions have played out have you changed your view at all about proportionality of Australia's response and whether it should be tied to those international outcomes?

ROSS GARNAUT: No, I haven't changed my view on that. That Australia should indicate its willingness to do its proportionate share in a very strong agreement, but if we don't have a strong international basis that we act proportionately with what other countries are doing. I still think that's relevant and in the paper on Monday I'll discuss some of the considerations we'll have to look at when we work out what's proportionate for Australia. But let's not pretend that the rest of the world is doing nothing. There're a very large number of countries, developed countries have got emissions trading schemes. California's legislated for one. California is in interaction with ten other states and Canadian provinces about extending that. The oil interests of Texas tried to destroy the Californian approach to mitigation, and took a - and put on the Californian ballot at the recent elections, a referendum to overrule that and they lost. So, and look at the State of the Union address by Barack Obama. Steve and I were in Washington at the time we were able to talk before and after the address with leading American officials so get some more depth on it. The centrepiece is really that story of the transformation of the American energy economy and it won't be done through an emissions trading scheme at a national level, but it's far reaching so let's not pretend that the rest of the world isn't doing anything. In fact in some ways the rest of the world is doing more, some parts of the rest of the world are doing more than I expected when I did my original review.

QUESTION: That certainly seems to be the outcome from Cancun that the states are being encouraged to put in place their own responses. So in the absence of an overarching document, how do you define what is the global effort?

ROSS GARNAUT: There are a few different ways of looking at that and I'll mention each of these in Monday's paper. I probably shouldn't get too far ahead of myself there.

CHAIR: We've got time for one more question I'm afraid.

QUESTION: Can I just ask much of the debates getting bogged down in the whole electricity price debate, how do you cut through that debate to – you're

obviously making a lot of public comment and so on about your paper and so on – how do you cut through that hip pocket debate about my power prices are going to go up therefore I don't want to see any carbon price, any carbon pricing mechanism?

ROSS GARNAUT: Yeah there are a couple of important dimensions to that. One very important thing is for our community to understand what proportion of any increase in electricity prices will be associated with a carbon price. And it's not very big. Lots of other things driving up electricity prices. A second point is that how much electricity prices go up as a result of a carbon price will depend partly on the success of the energy transition in Australia so the policies that are in place around energy transition are obviously relevant. A third point is that when you put on a carbon price the money doesn't disappear. If the government's selling permits, the government's got the money. It can give it back to the people without reducing incentives to economise on use of electricity and without reducing incentives for electricity generators to move from high carbon to low carbon sources of electricity. Now that...

QUESTION: What's an example of that?

ROSS GARNAUT: Well if the – an example would be if the government gave a, collected the revenue from the permits and gave it back as a tax cut, or an adjustment of tax and social security.

QUESTION: Can I just – I didn't quite understand when you – in your answer to my earlier question. When you were sort of talking about we need to start and the cost of not doing something is building up. Is it right to think that you will still be recommending a range of emission reduction targets 2020, 2050 but maybe some options about how we might start, how we might progress towards them. But you'll still have the targets in there?

ROSS GARNAUT: It's impossible to avoid the questions of targets because that's so - such a central part of the international discussion. But probably more important is how we get going, so there'll be a lot of focus on that.

QUESTION: Which is what the government...

ROSS GARNAUT: and the Greens for that matter.

- ENDS -

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