committee for economic development of australia

Transcript – A Taxing Debate: Climate policy beyond Copenhagen

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David Byers: Introduction and Welcome Address

Beyond Copenhagen: The Emerging Critical Issues

Thank you to you all for attending. It's been a big week of course on this whole topic of climate policy and you're about to get set for a little bit more to finish up Friday on. As well as thanking all of you for attending, I would also particularly like to thank our corporate table holders, True Energy, Allans Arthur Robinson, KPMG and Exon Mobil. I thank you very much for your support. Let me just get some logistics out of the road first. If you could just make sure that you've turned your mobile phones to silent or off in consideration of the speakers. We are expecting that there will be some media here today as well so I just wanted you to be aware of that. It is a public event.

As I mentioned, what a week it's been in climate policy. On Monday the opposition put forward its modelling on a base line and credit system which has become it seems the surrogate to opposition policy. Yesterday the government took its CPRS legislation to the senate and had it voted down. And today in the biggest development of all, well if you'll just bear with me for an hour or two anyway, we have Ceda launching its own report on this issue which is all about climate policy and it's all about taxing debate and what happens to policy in the post-Copenhagen period.

The report which you all have a copy of on your seats there is a substantial volume. The project itself we began in January on this project and it is a serious attempt to try to address the difficulties of climate change policy. It just so happens to be this week that there happens to be so much on it. Timing I suppose is everything but for us this is not just an opportunities entry into the debate.

Part 1 of the report tackles the difficult climate policy issues and specifically explores carbon tax versus CPRS or in fact broader than CPRS, the emissions trading schemes in general as a policy mechanism. Part 2 looks at what will happen at Copenhagen and we have some perspectives in there that you'll note from some of our key countries; the United States, China, India, Australia and also Germany on behalf of a European perspective. And the central proposition that Part 2 is looking at is whether that whole approach now that we have to the Kyoto style targets and timetables approach is really going to survive beyond the 2012 period for Kyoto.

And I suppose from a personal point of view, this report can just be something of a antidote to the do something brigade in this area who seem to dominate discussions about climate policy then I'll be well pleased. I don't know, for example, if you saw the ABC program last night, Q & A, where we continue to have these question and answers. This chorus of people saying we should just get on with it. Well get on with what? I mean we really do…I think most people who are close to this area acknowledge that we do have to move and we have to introduce policy settings but it's really what we do which is the key. And we have to understand the complexities of the problem that we're dealing with. It's not enough to simply say that we should do something and get on with it.

Today we're going to focus on Part 1 of the report. Three authors from the report, Porter, Carmody and Sampson will be addressing you today, together with three invited participants to stimulate

some debate and policy challenges on emissions trading as the policy choice in climate policy and we'll be considering such questions as how emissions trading did become the preferred vehicle for policy prescriptions in this area. We know that emissions trading is a more politically acceptable approach because it hides the true cost to consumers but have we examined closely enough the carbon tax option?

Carbon tax is clearly not a new idea and it may not yet be an idea whose time has come but today we want to examine it in the spirit of a potential policy Plan B that might enter the field of play from the interchange bench once the injured ETS is carried off the field. And look if you want some evidence that this area itself is very much a shifting field, I would suggest you look no further than page two of today's Australian which contains a report out of the Wall Street Journal which is from…and some comments from a Thomas Croker who is regarded as the co-author of emissions trading schemes and the idea that emission trading schemes could be the most appropriate policy setting in this area. He says now, after having put together as part of his doctoral thesis in the 1960's the prescription for cap and trade, that he believes he is sceptical that cap and trade is the most effective way to go about regulating carbon. In fact he prefers now an outright tax on emissions because it would be easier to enforce and would provide needed flexibility to deal with the problem.

Now why does he say that? He essentially says that because of a couple of issues associated with the problem itself. First of all is the fact that carbon emissions are a global problem with myriad sources and that cap and trade is better suited, therefore, to discreet local issues rather than something which has the characteristics of dealing with CO2 emissions. The second problem that he says is that quantifying the economic damage of climate change is fraught with uncertainly. So in that context cap and trade is much better suited to problems where the damages are clear and a hard limit is needed very quickly. So all I say to you is I advance that as part of the proposition that this is an area which is an unfolding story and reasonable people can change their minds on what is the best way to approach this as an issue.

Anyway, we'll be dealing a lot with those sorts of issues today. At this stage I just wanted to go straight therefore into the proceedings. We're going to hear shortly from Dr Michael Porter who is Ceda's research director and who is going to provide Ceda's research policy perspective on this area. Secondly I'm going to then invite presentations from Geoff Carmody who is the former co-founder of Access Economics and one of our report authors as well as Brad Page. Where is Geoff? Geoff, you can come up here at any time thanks. And Brad Page who is executive director of the Electricity Supply Association who is going to speak, not on the CPS itself, but on the broader issue of the emissions trading schemes and why the Electricity Suppliers Association sees that ETS has several advantages. Then we'll have some time for questions before we break for lunch, then we reconvene a panel under the chairmanship of Michael Porter after lunch and we'll have five people up here. We'll have out existing panellists here together with three more who will be having a discussion for about another hour. Plenty of opportunity for you to ask questions and I hope we have lots of debate and discussion on this issue today.

I am going to disperse with going through the bios for our speakers, they're all in the programs, we'll save some time because we have got a very full agenda today. Let me just make one final point and that is I'd like to, as well as thank you all for coming today, I'd like to thank all of the very generous contributors that we've had to Ceda's relatively new research gift fund. This is a very important part of our research agenda, we really value people's support and it does enable us to be able to put together and put forward research and policy ideas and we do very much appreciate that support.

Anyway, without any further ado, I'm going to now hand over to Michael Porter who is going to give a Ceda research perspective on this issue. Michael.

Michael Porter: Launch of CEDA Report

A Taxing Debate: Climate policy beyond Copenhagen

Thanks very very much David, not least for having me focus Ceda research on these matters. There's four topics where the research funding is targeted. Water is one, broadband is one which we're already very much a player. The four doors of competition, infrastructure competition. PPs and greenhouse. This is the fourth topic it's the diabolical one. I think the volume has excellent papers on these difficult issues and I'm not going to attempt to summarise them and two of the key authors of course will be doing that from their own paper. My views have drawn heavily on David himself who is an energy expert and the Ceda community and colleagues. Those who have recently influenced me include Geoff Carmody and Gary Sampson. Much earlier though I was influenced as student teacher colleague by Bill Nordhouse-Canaro, Ron McKennan Helvarian and others. So to me this is an old issue made topical by events and it was intriguing to get that comment on page two of the Australian today because that's been my take, that economists were out there articulating a trading scheme as a pedagogic device. Almost all of us, from the very beginning, thought externalities should be targeted in a pegovian way after a very famous economist called Pegu. I know as a former academic that cap and trade then was a teaching device. Quoters, credits, compensation cravats however would lead such a device to bring us back in my view to the old world of protection, corruption and so forth. Indeed the bottom line is that we want to get back to a predictably and transparent tax so endeth the first lesson. What has happened over the last few decades is driven by a mix of facts, variations around warming and theories modelling. What is true for a community perspective is that the accumulation of greenhouse gases and notably CO2 is seen increasing as both excessive and as a cause of global warming. The community's attitudes have been conditioned by what is perceived to be volatile weather, changed rainfall patterns and much more. Although this paper makes no comment on that science or the causes, cost and benefits of global warming, it acknowledges there is broad-based community pressure to reduce carbon emitting activities in Australia, greenhouse activities, and to reduce those emissions in some way that is efficient.

The Australian government has responded to these community pressures with the carbon pollution reduction scheme which is just a variant of cap and trade used in Europe under the name ETS. This has occurred despite the fact the ETS schemes deliver negative protection when adopted unilaterally as Geoff will be articulating. It penalises the energy intensive goods that dominate Australia exports and exempts imports that will compete with locally produced output. This has created understandable Australian pressure for compensation and carve out measures so that the firms do not feel victimised. While the government and even some members of the opposition favour the CPRS, the problems of implementation are so substantial that there needs to be developed a far more efficient alternative. If the model of tradable permanence is not made international then it cannot meet its objectives. Yet by going international it brings in the key meeting countries that also have very poor standards of financial governance. It is simply unreasonable to except a trading scheme to work across those countries and as Gary Sampson will note, there are recent moves across Europe to shift from an ETS towards tax models.

Along with Carmody and the Ceda volume, my paper supports a system where a tax per tonne of emissions is imposed at source but as with other input costs under the GST, this cost is passed down the chain of production. Price quotes and invoicing enables consumers to see the carbon element of price which is a relatively minor modification of the GST invoicing system. Goods and services that avoid using carbon at all stages of production will pay the pure 10%. Other goods and services will pay a premium in proportion to emissions intensity weighted over all stages leading to a final sale. Exports from Australia would be zero rated and taxed by the importing nations carbon reduction policies. Imports to Australia would be subject to border tax adjustments so they are treated the same way as locally produced items. Geoff and Gary Sampson will present on these matters very shortly.

One comment I would make is that the many firms that make trivial emissions as part of generating their value added could be expected from direct carbon tax except they would still be paying carbon elements in prices of imports and passing along the GST chain. This would apply for example to most service firms. An underrated problem with the ETS is that the trade is in financial instruments or GHG greenhouse gas derivatives, not carbon or greenhouse gases. We should have learned a lesson from the current global financial crisis. The bust of 2007 to 2009 was brought on by toxic financial derivatives and their misuse, trade and securitisation of what should have been secure housing finance.

This quantity of emissions argument for a CPRS is false because the leaking of emitting products from overseas…oops…because there's a serious issue of emissions leakage there is absolutely no certainty in fact about whether the quantity of emissions reductions can indeed be specified by a CPRS and so the main difference between the CPRS and a carbon tax is lost. While the ETS and the CPRS currently have a political head of steam in the EU and Australasia and possibly the US, there are many creaky bridges to cross. A particular source of vulnerability arises from its reliance on the creation of another financial derivatives market and the emissions and debits and credits and package derivative instruments that this market will spawn. That's why the financial experts, the bankers, rather like it. There's a lot of asymmetric information.

The difference between the current financial crisis and a future carbon derivatives bubble is the necessary involvement in order to obtain a global ETS solution of the many jurisdictions in the developing countries. As new jurisdictions with high carbon emissions join the market, this raises a new layer of complexity around the question of financial governance and the quality of carbon accounting. The emissions trading scheme ducks the question, who should pay for this adjustment? In contrast a local carbon tax based on national consumption of emission is something the world community can develop and phase in gradually. It can help finance tax cuts and reduce emissions schemes and with no penalty to the first movers as Geoff eloquently illustrates. A carbon tax can replace more distorting taxes. It can fund R&D schemes to help the Indias and the Chinas and provide aid to do just that.

In summary, quite apart from the EU evidence of the past 12 years, there are many in principle reasons to doubt the efficacy and durability of an ETS system given the continuing necessary involvement of assessors, auditors and regulatory parties. I don't mention here the head of the carbon trading division of the Papua New Guinea government has been arrested trading something that didn't exist. That's the sort of thing that will happen as we bring in the genuinely polluting countries. There is corruption, there's real capacity for a financial bubble. As with the financial crisis, many question whether counterparties to these contracts outside the OECD for example, will seek to exploit the major weakness of an ETS and there's a question then whether there will in fact be the emissions reductions as per the credit instruments the governments will be signing.

An additional point of asymmetry raised here is that the ETS fails to engage financial support of consumers who have been lobbying to do something about carbon. But it does attract the financial community who profit from the trades. A carbon adjusted GST is a broad-based approach in synch with community pressures for clearing centres. While politicians favour the ETS, there is widespread agreement amongst economists that there are threats to its long-term integrity and durability and remember this is a long-term solution across a huge range of countries. Sound economics suggest a case then for a consumption tax. Ross Garners final report also agrees with the thrust of this paper when he says in his summary on policy "A well designed emissions trading scheme has important advantages. However, a carbon tax would be better than a heavily compromised emission trading scheme." If you want any evidence about a compromise system, listen to the Canberra parliamentary show.

A carbon tax integrated with a GST also fits with the capacity of new technology and smart devices to inform us of costs in ways that have low transaction costs. Increasingly techno savvy computers that use these devices and that you see one from Google's parameter, this is the way things are going in the future. The phasing in, the carbon tax can be set at values per tonne that escalate to the desired value over a period making a phase in element more politically manageable and economically sensible. A ramp up of the tax fits with technical discounting arguments. I quite Ken Arrow and others here and notable that there is no case for precipitous action despite the current hype. While Australia does not wish to be a free-rider in reforms aimed at creating a safer and better planet, we should not be forced into unsound agreements or well-meaning but ineffective measures that will undermine the economy in the short run for no certain long-term benefit. At a minimum, we should design a robust scheme for shifting to a low carbon economy without large costs in transition. We need to get the incentives right and phase them in to adjust without trashing existing production and assets. We should also foster R&D aid in new developing countries and their emissions strategies.

Ladies and gentlemen, I'll leave it there. Just to say that Ceda research is very much on side with what has been discussed here and I'll leave it to Geoff Carmody and Brad Page to deal with more of the substance of these issues and options. Thanks very much

Geoff Carmody: Presentation

Rethinking Emissions Policy – The case for a consumption based approach

Thanks David and Michael. Can everybody see those slides clearly? It's important. I need to step back and just quickly go through what the hell we're trying to do here. This next slide summarises what we're trying to do. These seven steps are all components of the global agreement that is required to deliver an effective policy response. The first three steps deal with the science. I'm not going to debate the science, I'm not a scientist. I'll let the scientists punch it out. The next four steps, however, worry me a lot because to boil them down to their most raw, they tell us that we have a zero sum game on. Whatever the global target for emissions abatement is, we've got to divvy it up between all countries. That's going to be hard.

This map is another way of illustrating the point. I'm not this to say that Australia makes very little contribution and therefore doesn't need to do anything. I'm putting this map up, it's out of date anyway, I'm putting this map up to point out that we need to get especially the northern hemisphere on board or everything that we do will count for nothing. That underlines in my view the need, if we're going to Copenhagen and we're serious about getting a result, to make sure we take to Copenhagen a model that minimises impediments to it being adopted by the rest of the world.

You all know what my main message is. There it is. The reason I don't think a CPRS will work is because from the UNFCC time and especially from the Kyoto time, the notion of non-harmonised national responses to this policy problem has been entrenched in the agreements. Non-harmonised action is the root cause of the evil which I'll now describe to you. I think there is a better alternative. I think it's WTO complied. I think it removes carbon leakage which means we remove a major impediment to getting the world on board.

Stepping back and looking at the sort of models we could choose to deal with this in a broad based way, there's two sets of choices we can make. Firstly for each country what emissions are we going to target? Are we going to target that countries production or its consumption? The second set of choices is, what instrument will be use to deliver the outcome? One option is an emissions trading scheme, a cap and trade approach. The other is a carbon tax. Now the government has chosen options one and four. Then they've messed up one by compromising its integrity out of existence but they've chosen one and four. There are only four choices you can make in this game and I think they've maximised the damage by choosing the worst possible combination.

To see why, let me explain this from a national accounting perspective. Sorry about this. Globally by definition gross domestic product equals gross spending on that product. By definition it has to be true. We're not trading with other planets yet. It's also true globally that exports equal imports. This tells us that there are actually two emissions targets that we could adopt in adopting a policy to deal with climate change. We could adopt the production approach or a consumption approach. If we all moved at the same time it wouldn't matter. Either choice is fine. We're not moving at the same time and hence national differences become important.

Now let's look at what happens. Nationally exports don't necessarily equal imports and even if they do, a production approach hits exports and excludes imports, whereas a consumption approach does the opposite. Now we see the root cause of the problem of having non-harmonised national action. If we adopt a production approach we effectively put a tax on our exports and we exempt our imports. We effectively delivery negative protection to our industry acting unilaterally on a production based model. I have never heard so much garbage in this country over the last three weeks as relating to this point. The number of times I've heard the words "A carbon tax is protectionist" is just amazing. Ranging from who has been described as the thinking woman's crumpet, Tony Jones, well I can excuse him. All the way through to our very own trade minister, Simon Crean, have expressed this view. It's nonsense. In fact the government's not telling the Australian community that the policy that it's adopting, even with all the carve outs, is delivering negative protection to the Australian economy.

This is the sort of model they want to take to Copenhagen. I mean the Chinese and the Indians must be laughing themselves silly. I mean there's no way that a country in its right mind is going to impose negative protection on its own economy acting unilaterally. The big danger we face at the moment is positive protection. And we've actually got evidence that the government understands this. Look at what they've done to the pure CPRS model. They've carved out exports, not well, not comprehensively, not permanently. They've carved out import competing rather than carving in imports, again not well, not comprehensively and not permanently. They've eaten away at the base for the emissions policy which means that for any given emissions outcome you're going to need a higher and higher carbon price levied on a smaller and smaller section of the community.

And it gets worse. We haven't even worried about the trade exposed sector, we've gone further. We even carve out local production consumed locally. I mean it makes a lot of sense, it seems to me, to say that petrol is included in the CPRS but by the way we're going to offset any effect by reducing the excise. I can't understand that at all. In effect, the CPRS as applied by countries that are silly enough to think about it, is being carved away and applied to a smaller and a smaller emissions GTP rump.

More evidence. Look at what's happened since Kyoto's "agreed" in 1997. That's just a few bullet points that I can think of. If that's not symptomatic of dismal failure, I don't know what is. I mean I cannot understand how in 2009, after the experience of 1992 and the experience especially of 1997, we're still bashing our heads against a brick wall. I mean in fact there's a very good David Rowe cartoon in the Financial Review today, you should read it. Or look at it. So where is the world going? Are we going to get an agreement? Well notionally what we want to do is slice up an emissions abatement pie into slices that will be taken by every country.

Now let's suspend disbelief and let's suppose that every country at Copenhagen says yep, we'll sign up for a model precisely like the European model which by the way covers about 40% of its greenhouse gas emissions. Let's suppose, suspend disbelief, let's suppose that actually happens. That would be regarded by the government and by the world urges as a huge success. A huge triumph. That's what it looks like. And that's not going to happen. We're not going to get that. But even if we did, the black hole in the middle is still there on the

table to be negotiated. That's all the carve outs which relate to the trade exposed sector. Now who is going to go first on these? After all, these are in the trade exposed sector. No-one is going to go first on these. So even if we got the calamari ring I've got there in Copenhagen, we're still way way behind the eight ball and we're not even going to get that.

That's just a slide, you can read that later for your own amusement. That's my summary of what I think will happen which is basically nothing. I think the Prime Minister occasionally says something that's very accurate and his assessment of Copenhagen, which was not supposed to be reported I think, was extremely accurate. That's about what we can expect in Copenhagen. I think the main point of agreement in Copenhagen will be to meet again.

There are five reasons and I've summarised them here why a consumption approach is better. Ultimately it minimises the chances of not getting a global deal. If you get a global deal you're going to cover all emissions anyway through the consumption route. It's just a tidier way to go. Some say oh yes but if we go down the consumption route, we're out of step with the rest of the world. Don't make me laugh. Most of the rest of the world is not doing anything, we're not out of step with them. The ones that we're in step with only cover 40% of their emissions. Besides, the Europeans are already talking about border tax adjustments in respect of imports from countries that don't adopt a climate policy and so are the Americans. Who is out of step?

Now let's look at evidence-based policy. Before this government came to office it said that it was determined to implement evidence-based policy. I think I got that order the right way around. The senate select committee actually recommended that modelling be done on five additional policy options as well as the CPRS. Of the six options, therefore, five are variants on a production base and one is a consumption base model. But at least the committee came out and said well it's sensible to look at all these models and see which gives us the best cost benefit outcome. That's what good policy is all about. So full tick to the senate for that. The government's response was commendably fast but not very constructive. So we're all waiting for the opposition to see what they came up with. They were a bit slower and a bit more wordy but similarly not very constructive. They've modelled one option effectively rather than the other five.

We do have some evidence, it's very cryptic, but we do have some evidence from the treasury's modelling of the CPRS which appears at page 84. For those that have insomnia, I recommend this report but on page 84 we see this statement about allocations based on production versus those based on consumption. I was quite taken by that statement as you might imagine. But then I keep hearing the climate minister saying that the model that they've chosen is the lowest cost option. I'm just trying to work out how both propositions can be correct. I have got a slide on it but I want to let you know that my old firm, Access Economics, is doing some modelling on the consumption based approach and this has been made possible thanks to the support that we got from David and Michael and Ceda in providing some funding for Access Economics to do this modelling.

As I say, it's not yet complete but it is looking at a couple of scenarios. It's comparing a fully articulated CPRS one, with the CPRS as it is now compromised to buggery and the consumption-based approach. It's looking at those three models relative to business as usual and looking at the economic effects associated with those models. We're still tidying the results up a bit but the results are interesting. I won't talk about the fully blown CPRS because we haven't got that and the way the world is going, we never will. Needless to say we murdered that one. But comparing the CPRS with the emissions intensive trade exposed carve outs with the consumption model, we can show that for the same carbon price for example in 2020 or 2030, so we're comparing the same effort to reduce emissions, same carbon price. The consumption approach produces a lower reduction. By the way, it does produce reductions. These policies cost. Any notion that you can do these policies with no

cost is just a lie. People that tell you that ought to take their hands out of their pockets and send one of their hands a Valentines Day card.

The modelling shows that there was a lower reduction in GDP, GNP, employment, investment, household consumption, exports, imports and real wages under the consumption approach than under the CPRS carved out approach. The emissions reduction in absolute terms under the CPRS was larger but it was larger because of firstly, carbon leakage which means those emissions went offshore. They don't count because we lose the emissions and some other country generates them. Globally that makes no difference. The production model also produced a larger reduction in emissions because it produces lower output. Well duh! The point of the modelling seems to be that we will be able to get a better trade off between the costs of reducing emissions and the emissions reduction that we want to deliver if we follow the consumption approach.

The other interesting thing from the model was the different industry effects. Some industries, such as petroleum products, aluminium, other nonferrous metals, were clearly less adversely affected under a consumption approach than under the government's carved out CPRS. Interestingly, some sectors, chemicals, rubber and plastics for some reason is one that comes to mind, actually do better under the government's approach. I'm not surprised to find that some industries do better, that's just a manifest of the reality that if you use ad hoc special deals to do your carve outs for trade exposure, you're not going to get it exactly right. It's going to be inaccurately calibrated and say you'll have some that do better than they should. Overall though, the modelling results look encouraging.

There is some modelling that has been done in the European community too, I won't go into it in detail because I think I'm running out of time, but it compares carbon leakage for the European Union under a production approach and five variants of a consumption approach. And just look at the left hand side auction and BA full bars. Auction is the production approach, BA full is the closest thing they had to my consumption model. In all three of these trade exposed industry cases. Carbon leakage was smaller under the consumption approach than it was under the production approach.

Final word on emissions trading, just remember emissions trading per se does not reduce emissions by one gram. It's the cap that reducing emissions. Trading just shuffles them. Not surprisingly banks love it and not surprisingly those who trade in these pieces of paper, whether they're banks or not, love it. Remember all this trading does nothing to reduce emissions, it just shuffles them. Politicians love emissions trading because it blurs who is responsible for the price signal that we end up seeing. They don't have to claim that it's their fault even though it is.

So how do we go forward? We've got to get the developing world on board soon on some scheduled timetable, even if not at the same time as the developed world. Without them on board, go back to that map I showed earlier. You can forget this, it's just a waste of time especially for a small, relatively small absolute emitter like Australia. We're not going to get those countries on board or indeed a lot of the developed countries on board if we persist trying to flog around the world a negative protection model that countries have to adopt unilaterally. If we wanted to start again, a good thing to do would be to start with seven core principles for how this agreement should work and I've set them out up here. I think if you read these at your leisure you'll conclude that they're just motherhood. If you couldn't get the WTA membership to agree to these then there's something wrong. And yet I think these sorts of criteria would be important shaping factors in determining which model would be best suited for generating a global deal when countries act at different times. Naturally enough, because I set up these principles, the consumption model passes them with flying colours.

This is a diabolical problem. It's diabolical mainly because the costs come early, the benefits come late. We're not sure what they'll be and we individuals probably won't benefit from them at all, it will be our succeeding generations. But if we want to do something about it now and I'm accepting that we do, if we take to Copenhagen a model that says here you go first and by the way impose negative protection on your economy, we might as well stay home. At least we'll save the carbon in the airfares.

I think I've gone over time so I think I'll get out of here. Thank you very much for your attention.

Thanks Geoff. We'll now welcome Brad Page for his presentation. Chief Executive of Electricity Supplies Association.

Brad Page: Presentation

The Case for Cap and Trade

Thank you David. I might just make a slight correction. I represent the Energy Suppliers Association, not just electricity these days. We also have the pleasure of welcoming the downstream gas industry into our brethren. And thank you very much for the kind introduction. It's really very much an honour for me to be here today.

I think that climate change minister Wong actually undersells the significance of introducing a price signal for greenhouse gas emissions when she talks of this as the most significant structural change since trade liberalisation. Quite frankly I think it's vastly larger. Using the best possible mechanism or perhaps even sweeter mechanisms is patently impotent. Australia is a relatively energy intensive economy built on accessible and low cost energy resources. Our electricity sector delivers some of the lowest price energy in the OECD. However, it does so while also emitting significant amounts of carbon dioxide. The sector emits about 200 mega tonnes of CO2 each year or about 35% of our nations total emissions. Over 80% of grid-based electricity is from coal fire generators while another 12% comes from gas-fired plant. Obviously a carbon price is a significant additional cost for the electricity and gas sectors. But we also need a price on carbon and long-term emissions objectives to guide efficient investment in new electricity and natural gas infrastructure.

Importantly and I echo Geoff's views here, this debate is happening in an international context as it should. After all climate change is a global issue, the atmosphere is ambivalent about the point source of emission. A tonne of carbon emitted for example in Peru has the same effect as a tonne of carbon emitted in Australia. This has some significant impacts when considering policy responses to greenhouse gas emissions. In economic terms of course the atmosphere is a common, a public good. Consequently the ability of one or more parties to use the atmosphere to emit greenhouse gases and in the process adversely effect the amenity of others without compensation is a feature and it's at the centre of why finding a global solution is to problematic. Who, after all, wants to pay for something that has been free for so long?

It's also a natural consequence of this that to the extent that any nation or individual acts unilaterally to address its emissions, it will be unable to capture the full benefits of this action unless similar actions are taken by others. At its heart, this is the reason why an internationally negotiated solution is required. Unlike Geoff, I'm going to wimp that one, leaving this aside for the moment because frankly in 15 minutes I think it's far too hard to sort through all of the issues that are involved. But undoubtedly there has be some form of rationing of the use of the atmosphere if the concentration of greenhouse gas emissions is to be arrested as according to the IPC it must.

We therefore, from an environmental perspective, are really considering how to ration the use of the atmosphere for the emission of greenhouse gases. Whilst I understand climate scientists, of which I'm not one, talk in terms of ranges of 450 to 500 parts per million as the

upper limits to avoid so-called dangerous climate change, undoubtedly we really have to get on and start sorting through some of this stuff. If you presume that those upper ranges of atmospheric CO2 concentrations are translated to a national level, then targets for the emission of CO2 at any future time can be established using a base year and expressed in tonnes of emitted CO2 equivalents. Having defined such a target or limit, there are then a range of mechanisms open to government to cause behaviours by companies and individuals alike to change.

Now I'm not proposing today, given my brief, to catalogue all of the mechanisms that are open to government because frankly there are just too many. And two of the main options frankly are the subject of the presentations today. I'm open to acknowledge that all the mechanisms have their strengths and weaknesses but I'd hope that by now most would agree that a transparent price on emissions must be the cornerstone for a carbon abatement policy. Tricky command and control regimes rarely deal with the central issue and are often polluted by political objectives and inevitably try to pick winners. This is almost always inefficient.

I'd then contend that the most appropriate mechanism needs to satisfy the following five objectives.

Firstly, it must ensure emission outcome integrity. That is, the mechanism needs to be premised on achieving the central goal; a limit to the emission of the target gases. To have a mechanism in which emission outcome is uncertain or highly variable, decrease confidence in the voracity of the mechanism and increases the potential for unexpected price volatility.

Secondly, achieving a low emission economy at the least cost is important. Mechanism that impose inefficient cost on the economy simply divert resources from more productive purposes and impose dead weight losses at a time of potentially substantial structural economic change.

Thirdly, economic growth must be supported, indeed encouraged, by the mechanism. Significantly reducing greenhouse gas emissions in a short period in an energy intensive economy like Australia's, will bring with it substantial economic dislocation and structural adjustment. Managed poorly, this will come at considerable economic cost which perversely will reduce the national ability to make the switch to a lower emission future. By the same token, carbon emission policy uncertainty will prevent timely new investment in energy and emission intensive industries.

Fourthly, a supportive predictable investment climate must be created. Dramatically changing course away from a business' usual emission profile will require billions of dollars of capital to be diverted from traditional technologies and approaches into alternative and today less common approaches. Much of the most significantly impacted industrial infrastructure is very capital intensive and long-lived. Electricity systems, for example, are among these. Investors must have confidence that the carbon constraint path and attendant cost of emissions is well mapped ideally for several decade into the future.

Finally, achieving a manageable transition of the low emission future is the final objective that the mechanism must accommodate. To achieve the emission reductions that the scientists advise are needed and governments are increasingly committed to, are simply not achievable in many sectors by employing technology and fuels that are available today. Including those that are lower or zero emission but higher costs. Attempting to force rapid change that strains assets and capital while not having available a replacement technology to achieve the requisite emission reductions, will deliver unnecessary economic losses and limited environmental gain.

While none of the mechanisms available to government are perfect, on balance I think that cap and trade is capable of meeting the five objectives I've just outlined. Importantly, whether or not it does in practice depends very much on the choices governments make about detailed scheme design. So just to make sure that we're all talking a common language, I hope you'll indulge me in briefly describing the key features of a generic cap and trade scheme and I stress this is not the CPRS I'm speaking in support of. My apologies to those of you who already have a deep understanding of these matters.

But in a cap and trade scheme, the maximum amount of emission in a specified time period are capped by government decision with permits up to that amount created and issued by a government agency. The convention seems to be that one permit represents one tonne of carbon dioxide equivalent. At the end of the period entities covered by the scheme are required to surrender permits equivalent to their emissions or face penalties. Permits may be issued by administrative or free allocation to emitters or by holding auctions or by a combination of the two. Importantly, the permits are tradeable instruments enabling holders of excess permits to sell them to entities seeking permits. They may also be created by entities that engage in activities that absorb or abate carbon. They are then able to sell these permits to others as well.

The price of the permit then is determined in the market. By the interplay of the scheme cap, the demand for emissions and the supply of abatement opportunities. So taking such a scheme and comparing it to the objectives that I set out before, I think that a cap and trade stacks up reasonably well. So let's take a look at it.

The first objective of assuring emission outcome integrity, one of the cap and trade scheme strengths is that it fundamentally relies on establishing a cap on emissions and issuing only sufficient permits to meet that cap. Given that the fundamental reasons for implementing a price on carbon at all is to limit emissions to avoid undesirable concentrations of greenhouse gas emissions, a cap and trade scheme goes straight to the policy objective in an unequivocal manner. I know that this seems to be a very restrictive approach to some and that it can be at odds with economic cycles. But simple variations to the scheme where the banking and borrowing of permits is permitted can address these drawbacks but in a measured way that does not threaten the integrity of the scheme.

The second objectives is to achieve a low emission economy at least cost. Because the cap and trade system engages the power of the market, parties that are obliged to surrender permits will seek out the lowest cost methods to meet their obligations. They will, for example, examine the competing options of taking direct emission reducing actions, acquiring permits on the open market and entering into those devilish things that Geoff objects to, derivatives and other hedge products. They are also able to examine the offerings of carbon abatement services or offsets, whether domestically or offered as part of the international arrangements that deliver often low cost emission permits from developing nations. The cap and trade scheme offers a relatively wide range of options for acquiring permits at least cost. In my view, this is one of the great strengths of a cap and trade scheme.

Thirdly, economic growth must be supported. In some ways the determinate of this is more related to the cap selected than to the mechanism. Aggressive caps will involve deeper and more disruptive structural change than will moderate ones. Once caps are selected, however, the cap and trade scheme provides incentive and reward for those businesses that can offer the lowest cost forms of abatement. It will encourage the development of new businesses and sectors as well as underpin the deployment of new low emission technologies. However, in Australia's case we have a large and very important group of energy intensive trade exposed industries. We are well aware that the government has been wrestling with how to avoid disadvantaging these industries in a global sense where competitors are often located in countries that do not and are unlikely to have in the near term comparable carbon constraints.

But this is not in my view a problem caused by a cap and trade scheme per se. Any scheme that imposes carbon costs on energy intensive industries will face this issue. It is a matter of firstly setting on a policy on how to treat the affected industries, that is does the government wish for them to continue and I believe that should be a no-brainer of a question and after that to establish an efficient means by which the additional costs are avoided in the absence of similar carbon impulses and competitor nations. Under a cap and trade scheme there are several ways in which this problem can be dealt with. Exempting sectors from coverage is one as is the provision of free permits. The flexibility of the scheme also means that if there are further policy objectives related to seeking to reduce emissions from these sectors, then less than full carbon cost support can also be applied. I made note that the government is using such an approach they are not exactly without some controversy.

Fourthly, we're seeking a supportive predictable investment climate to facilitate future investment. For all mechanisms that governments may use to reduce greenhouse gas emissions, there will be policy risk associated with them. As the arrangements are either synthetic markets created by instruments of government or regulatory posts that can be changed by governments almost at a whim. One significant advantage of a trading scheme, however, is that the permits are issued over a number of forward years and afford the owner a property right. Once markets develop and permits, their derivatives and other instruments are actively traded, there is an inherent significant deterrent for governments arbitrarily changing the scheme arrangements, caps and other details that would lead to destabilising and I might add devaluing that permit market. At least it's my fervent hope that all Australian governments will be sophisticated enough to appreciate the enormously adverse impact of clumsy actions that devalue permit markets. Perhaps I'm deluded but I'm hoping not.

The effect of this is that investors in energy infrastructure as well as broader energy or emissive industries can allocate capital with reasonable confidence that the scheme fundamentals and permit price will not be arbitrarily affected by government action.

The final objective was to achieve a manageable transition to the low emission future. The cap and trade scheme provides governments with very significant flexibility to achieve a manageable transition to a low emission future. Aside from the clearly important task of carefully selecting the emission caps, the manner in which permits are issued will drive the options available to governments to ensure a smooth transition. For example, a scheme that requires full auctioning of all permits will impose a considerable and immediate additional working capital requirements on all liability entities. It will increase costs but if this is an offset in some way will provide the government with a large revenue stream that used carefully can be invested to ease the transition costs.

At the other end of the spectrum, the initial free allocation of permits to emitting entities will enable a lower cost of compliance and reduce the need for additional working capital. However there is no revenue stream for government aside from those dreaded stamp duties and the GST on trading activities. But the mix of approaches from these two extremes are almost limitless. For example some free allocation and some auctioning is one approach. Some initial full free allocation phasing out over a number of years to be replaced progressively with increasing volumes of auction permits is another. No matter the approach, cap and trade provides the flexibility for governments to select a mix that will deliver a manageable transition to a low emission future.

In summary, putting a price on greenhouse gas emissions is needed. There really can be no contention about it if we are to remove one of the greatest policy uncertainties that constrains timely new investment in industry generally. However, the mechanism chosen to do this matters a great deal. In my view, a well deigned cap and trade scheme provides a great opportunity to secure emission reductions at least cost while providing business with as much investment confidence as is possible in an environment where governments can choose to

either create synthetic markets or apply intrusive regulatory measures to achieve their climate change objectives. I for one will always prefer the power of markets over the unpredictable and intrusive hand of government. Thank you.

Discussion Q and A

David Byers
Thanks Brad. Well we have some time for questions and we have two microphones in the centre of the room if you would like to move to the microphone if you have questions. While you're thinking of questions, perhaps I might just throw to our panellists. Brad, do you have a quick response to what you heard from Geoff and likewise Geoff do you have a quick response to what you heard from Brad?

Brad Page
Thanks David. Geoff I think you're a very powerful advocate of your approach and of course I'd expect nothing less. But I am particularly interested in understanding how it is you'd propose that you determine the imbedded carbon value in any import coming into the country in such a way that you don't wind up with a bureaucratic nightmare and series of complaints from exporting nations that much like Australia once did on imported pig meat, we'd actually confected a nasty set of scenarios that really didn't exist.

Mark Carmody
Is that the best you can do?

Brad Page
We'll start there.

Mark Carmody
You don't need to worry about the emissions imbedded in imports. Indeed because of WTO considerations and in order to make the policy tractable, running off a GST model you determine the emissions intensity of a particular product as it's produced in Australia. That emissions intensity multiplied by the carbon price or carbon tax in Australia. My scheme can work with an ETS. The emissions intensity multiplied by the carbon price gives you an ad volorum cost adjustment for that product which, divided by the product price, gives you a percentage adjustment. That percentage adjustment is applied to the matching import of that produce just the way GST does. That means that the ad volorum adjustment to both the locally produced product and the import is the same just as it is with the GST. It's WTO compliant just as the GST is, just as the luxury car tax is, just as the wine equalisation tax is, just as all the revenue customs duties are.

Brad Page
Can I have a follow up? Because this depends on emission intensity, I wonder then how you'd deal with aluminium produced in Western Australia based on gas-fired generation, that is about .5 to .6 of a tonne per megawatt hour versus aluminium produced in Victoria where the average is 1.4 tonnes per megawatt hour.

Mark Carmody
Yep. Again starting off we're going to be…all of this by the way, whether we're talking about ETS or carbon, consumption or production, all of this depends on carbon accounting. We're going to start off with carbon accounting that's pretty rough. We're then going to start off with product groups that are going to have be averaged. I've gone through this in excruciating detail in the second policy note. Anyone with insomnia I recommend it. But again it's a question of making sure that the product average emissions intensity multiplied by the carbon price is the adjustment made to those products in Australia wherever produced and therefore

the same ad volorum adjustment is made to matching important wherever they're produced. It's an average and over time as the carbon accounting gets more refined and more detailed, you'll be able to drill down and get a more discriminating approach over time. In fact my model has three phases; an inception system phase where it's pretty rough averages relying on the best carbon accounting we've got in Australia. As it gets better we allow a bit more competition within Australia between products. The ones with the lowest emissions intensity get a bit of assistance relative to the ones with higher. And then in the longer term when you've credible accounting frame works overseas, you might even think, this would be subject to negotiating WTO rules, you might even think about actually allowing products to be traded not only in terms of their characteristics and price, but also in terms of their imbedded emissions once you've got a credible framework for measuring those and then you would have genuine emissions trading where countries would be allowed to trade their low emission advantages internationally.

David Byers
Well we're going to have the opportunity to purse this a little bit further in the panel session after lunch so we might just leave that particular point there. But I'd better give you the opportunity Geoff to respond to Brad's presentation.

Mark Carmody
Look I think in one sense we're talking on different paths. My model can work with an ETS. I just think that's the worst way to go. But it can work with an ETS. The reason I worry about an ETS is not its conceptual appeal, I think in theory both could delivery the same price or quantity outcome. Once fixes price, the quantity is determined by the market. The other fixes quantity, the price is determined by the market. The practical problems with an ETS in Australia and in the European context are the things that worry me, especially in the context of investment certainty. We don't have investment certainty either with respect to price or with respect to emissions qualities under the proposed CPRS. We don't have quantities certainly contrary to what the minister says because point one we've got carbon leakage risks which mean that any reduction we make in part counts for nothing because it's just shuffled off shore. Secondly we've got the right to import emissions permits from overseas and they violate the cap that we set anyway. Again we haven't got certainty. When you've got business cycles and the prices is determined by a quantity of decision of government, interacting with demand and supply through the economic cycle, price is volatile. We know that, we've seen that in Europe. In fact in Europe at the moment the carbon price is such that emissions permits I assume are getting very close to the same quality of investment asset of sub prime mortgages in the United States. We don't get a reliable price, we don't get a reliable quantity. With a carbon price on the other hand, you would give businesses something that they do value, especially for long-term investments, which is a relatively predictable ramping up over time price for emissions which they can then plan their investment decisions around.

David Byers
Brad do you want to respond to that because you did say having a stable predictable climate for investment was really one of your key principles.

Brad Page
I guess this really comes down to your faith in government and I don't have a great deal of faith in government in setting taxes. Well I do actually, they'll set them alright but they change them and they change them at a whim without a great deal of need to consider broader investment outcome. I actually think that when you start seeing cap and trade schemes where there is a pathway mapped out forward, where it's quite possible then to start determining the likely value of permits and the range that they most reasonably will be operating in, you have an ability to manage some of your price exposure better than you do with the tax. And I think this is quite possibly a point where Geoff and I will probably agree to disagree but I do think

that unless we have an utterly delinquent government, as soon as you've started this market and you have real value sitting out there in permits, the last thing it needs to do is start to be intervening and arbitrarily stranding permit value.

David Byers
I know Geoff you want to respond but let me just make one point from the European experience, the volatility of permit prices have been such that it's been up around the 35 Euros ranging to about 3 Euro cents.

Brad Page
And I'm happy to respond to that because I think that it's been a little too easy frankly to jump on that from this side of the world and say the Europeans have a failed experiment. In fact if you go and have a look at a fair analysis of it, there are a series of governance and informational issues that turned up there. The first is thankfully in this country we're dealing with one nation. In the EU they started out with 15 and are now up to 27 odd. Sovereign nations each able to allocate their emissions permits as they saw fit subject to some loose oversight by the EU. Not surprisingly, each of those governments sought to advantage their own country and in many cases over allocated. But in the first period the market did not understand that there was no scarcity. It was when it became apparent after about 18 months that there was no scarcity, that the price crashed. The second reason the price crashed right at the end was that the permits that were issued in the first and second allocation…sorry the first allocation period over four years had no value into the second allocation period. So at the point of which the scheme was concluding any value in a permit was worth it because after I think it was 30th June there was zero value on it. So the volatility is largely down to informational asymmetries and a fairly poor governance arrangement. Subsequently and recently and Geoff is quite right that the price of EU permits are pretty low at the moment, but it is absolutely on the back of a depressed economy where the activity levels and therefore the emissions have dropped and frankly I would have thought in that circumstance you'd want to see the carbon price come down.

David Byers
Well Geoff I think we'll give you the last word before we break for lunch,.

Mark Carmody
I am a big believer in sovereign risk and we're going to get sovereign risk with governments especially over long periods of time whether we like it or not. I'd like to take my sovereign risk in transparent doses via tax rates rather than in other forms and if you want to look at sovereign risk in this environmental area, just have a look at the ACT government's feed in tariff and the way it's financed. It is a little piece of dynamite. Just on the revenue side, this is an opportunity if we believe that there is an externality to be dealt with here, that is global warming, this is an opportunity to use a large chunk of the revenue raised from a carbon tax, not to reduce real living standards or not to reduce them much, not to increase the overall tax burden, in fact it would be better to leave the tax burden the same or reduce it slightly, but it's an opportunity to use that revenue to get rid of a whole raft of inefficient taxes in Australia, not least at the state level. Do a few other things about vertical fiscal imbalance possibly at the same time and end up with an efficiency dividend working from both sides. That is, improved efficiency in terms of dealing with an environmental problem and improved efficiency in the more conventional sense getting rid of taxes that at the moment impose large dead weight losses on the economy.

David Byers

Alright well we've have to leave it there. We'll break for lunch now and we'll be back in about 25 minutes. So please take the opportunity to formulate questions over lunch. I'd like you to thank Brad Page and Geoff Carmody for their presentations this morning.

Panel session

Introduction by chair Michael Porter

Ladies and Gentleman, I'm not going to say there's no such thing as a free lunch, it's been said before but it did bring you to quiet. We have three panellists who are each going to speak very briefly and then they'll be joined by the other two panellists, no, you come up now Geoff. The first of the panellists to speak will Mike Prosser who's the Executive Director of The Australian Aluminium Council, very much involved in these issues, Les Coleman is from the Department of Finance at Melbourne University and finally Gary Sampson who for eighteen years was at WTO as a Director at the end there and currently visiting Professor, Melbourne Business School and also the London School of Economics, so a wide range of perspectives there. I'll ask Miles to kick off.

Commentary

Miles Prosser, Executive Director, Australian Aluminium Council

Thanks Michael and thanks to CEDA for the opportunity to come along and talk today and thanks also to Geoff and Brad for opening up the complexities of what is an enormously complex and challenging issue. If you look at the line up of speakers for today it's pretty clear that I'm here to talk about it from an industry and energy user's viewpoint obviously any debate which talks about carbon cost, climate change response, emissions trading, the people that use energy, the industries that use energy are the ones that are likely to face the increased costs and there'll be an issue there of whether those costs can be passed on.

I'm actually going to borrow a bit from Geoff here and actually start off by going back to some of the principles about what it is we're trying to do and when we look at what we're trying to do, look at some of the things that might inadvertently happen along the way. So this chart is a chart of the global emissions of carbon dioxide equivalent, this is what the scientists are telling us is causing climate change, this is what we've got to reduce if we're going to resolve climate change.

Now you can see that the emissions are already at a very high level and that they are rising at quite a rapid rate. Now I'll put an arrow on there to describe of those emissions which part of it belong to countries which are countries with a Kyoto target, so this area up here are countries that have a target under the Kyoto Protocol and the emissions in this band here are countries that don't have a target under the Kyoto Protocol, so a few things become sort of immediately obvious and that is that the increase in emissions is happening as much or more so in countries that don't have a Kyoto target and those countries that don't have a Kyoto target, the developing countries, already represent a sizeable proportion of the world's emissions.

Now if we look at where the scientists are telling us we've got to get emissions to address the problem of climate change there was a reference earlier to the idea of getting it to the level of

450 to 500 parts per million, to achieve that sort of level we need to reduce global emissions down to this sort of point here. Now again a few things become immediately obvious and they've been brought up by some of the other speakers, if we're going to achieve those sorts of levels we have to get a dramatic turnaround in the rate of global emissions and that turnaround in emissions has to occur in all countries across the globe. You can see from where the non-Kyoto countries are now to where we're trying to get to, this is clearly not going to be done just by Kyoto countries taken action, there need to be a global solution to this problem because it is a global issue. The other thing that hopefully has leaped out at you from that graph is the role that Australia has in the global thing, Australia is this thin light coloured band along the top there and that's got a lot of important implications, the obvious one is that it really doesn't matter what Australia does to reduce its emissions, that by itself is going to be a trivial amount in terms of reaching the global target that we have.

A lot of the current debate is pitched on terms of whether Australia should have a 5% reduction or a 15% reduction or a 40% reduction and whether we should start this scheme now or in a year's time or in two year's time. I think you can see from that graph that it wouldn't really matter whether Australia started this year or in two years time and it wouldn't matter whether Australia has a 5% reduction or a 40% reduction; none of those permutations are going to do much to address the global problem we've got. That's not to say we don't have an important role in this process but I'd suggest to you that the role Australia has in this process is to demonstrate that emissions can be reduced without crippling your economy. That's the role that has to be put forward here because if it can't be shown that emissions can be reduced without damaging your economy then the world has no hope of bringing these other countries on board to reducing their emissions. The most important role for Australia in this process is not to reduce our emissions by 15% or 20% but to demonstrate that reducing emissions is compatible with growth in the economy.

Now I'd like to move, sorry, one final point I'll make on the international and Geoff brought this out quite strongly was that unlike issues like trade liberalisation and tax treatment there is an important difference here when it comes to global climate change policy, there is no advantage in moving first, so in trade liberalisation the country's economy benefits if you liberalise trade ahead of other countries. When it comes to emissions reductions and imposing costs on your own economy there is no first mover advantage, so the diabolic problem that's been set up here is that we need all countries to take action but the countries that take action initially are the ones that will wear the greatest cost of what happens. That's what makes this issue so complex and so difficult at an international level and it's also what makes it so important at a domestic level that when we do take action we consider what the impacts would be on competiveness.

So I'd look at what those impacts are on the competiveness of Australian businesses, I'm going to talk through a global cost curve, this is a generic one there's no real data in here and I'm coming at this from an aluminium perspective but it would apply equally to a whole bunch of other industries. If you look at the global production of any commodity and the cost of producing it in various facilities around the world you can construct a global cost curve, where the lowest cost producers are down the bottom left hand side and the highest cost producers

are in the top right hand side. Now at a certain point in time those producers may all be making a profit but their rates of profit vary greatly.

The next thing to do is to look at, you can arrange that cost curve into quartiles, the first quartile are obviously the lowest cost producers, it's where the profits are most healthy, where the viability is strongest and it's also where global companies will tend to make investments when they're looking to expand their operations, so if you're going to build a new facility somewhere in the world you're going to build it somewhere where it can come in at that bottom end of the cost curve.

The second quartile of the cost curve is still a very profitable operation, still viable, the companies that own those sorts of operations will be looking to reinvest in those facilities to keep them down the bottom end of the cost curve. So at the second quartile you can keep investing and keep yourself as a viable operation.

Once you get to the third quartile the cost curve is starting to get into dangerous areas there, to bring a third quartile operation down to a low cost producer in the world you'd have to make a substantial investment in that facility, perhaps markedly increase its production levels, change the technology, it would be a significant investment and at that point you start to draw yourself into a comparison, are you better off building a whole new facility then investing in the large scale on the third quartile.

Once you get to the fourth quartile of an operation you're really in the death zone, while the price of a commodity is high enough for that to be profitable and to turn a cash profit that facility will keep going, when the price drops that facility will be the first one closed within global operations.

Now why is all that relevant – well if you look at our industry - the aluminium and alumna industry, the operations in Australia at the moment occur usually at the top end of the first quartile or the bottom end of the second quartile in global operations. They're competitive operations, they're low cost producers, the owners of those facilities and their global owners, are looking to reinvest in those facilities to keep them at the bottom end of the cost curve.

When the government brings in an imposed something like an Emission Trading Scheme, the CPRS, and a renewable energy target, the key thing about these policies is they only increase the cost of Australian producers, they don't increase the cost of any other producers on that global cost curve. So it takes an Australian operation and it adds extra cost to the top of an Australian operation, you can pretty much see what happens when that happens, you shift that operation up the cost curve, you take it from where it is and it has to shift somewhere to the right hand side of that cost curve and the question is how far up that cost curve it shifts. The analysis we've done for our industry is at the current proposals for the Carbon Pollution Reductions Scheme and a Renewable Energy Targets are significant enough that they would move an operation from the boundary between the first and second quartile to the boundary between the third and fourth quartile. The cost is significant enough that they'll move Australian operations two quartiles up in the global cost curve.

Going back to what the impact of those quartiles is - the significance of that is it takes these facilities from one that you would grow and invest in to a facility that you'll curtail when the price drops and will be one of the first facilities shut on the global scale.

Now we hear a lot of talk about carbon leakage and a lot of criticism of the idea of carbon leakage that no-one's going to pick up these operations and carry them overseas and put them elsewhere, that's not how carbon leakage occurs – this is how carbon leakage occurs – you reduce the attractiveness of reinvesting in Australian facilities as a result of not reinvesting in those facilities they drift up the cost curve and eventually at some point due to market forces they'll close. So what happens is as the price drops and the ceasing of operations occurs in the fourth quartile when the market comes back you rebuild a new plant in the first quartile. So the leakage hasn't occurred immediately after the policy was brought in but it was an inevitable result of increasing costs in Australian operations and not increasing them elsewhere.

So with that background what view would the aluminium industry take to the sort of two proposals that where being canvassed this morning - the Consumption Carbon Tax type model and the Emissions Trading Scheme model, noting that Brad wasn't backing the government CPRS model. As an industry we're a significant player in global markets, Australia's the largest producer of alumina, the largest producer of bauxite and the fifth largest producer of aluminium; it employs seventeen thousand people in Australia, 80% of the production is exported earning eleven billion dollars in exports. This is an industry where Australia has a competitive advantage, we're not looking for government support in order to be able to sustain the industry, it's an industry that competes globally in its own right in Australia. As a result of having good natural resources in the form of bauxite, competitive energy supplies, skilled workforce, competitive supply chains, this is an industry where we could be looking for significant growth in Australia.

Now clearly the consumption model that was described by Geoff deals with a lot of those international competition concerns that I outlined. So if you go back to this graph, if you look at the consumption model being described by Geoff these costs would only be imposed on product that's been sold into the Australian market and other products being sold into the Australian market from other operations would face a similar size cost. So the global cost curve in the context of the Australian market would all move up evenly, in an export market these costs would not be opposed on Australian production if it's being exported, so the global cost curve wouldn't change in an export market. So from the point of view of an industry that's competing in international markets it's a clear winner to a consumption model compared to a production model when it comes to imposing a carbon cost.

When it comes to the question of whether you'd be more interested in an Emissions Trading Scheme or a tax I think the answer is less clear, you're really faced with a devil's choice there as to whether you want to hand money over to the government and trust that the government will be rational and efficient in the way it spends that money or whether you want to be involved in a market which includes a lot of middle men and trading in derivatives and trading in hedge firms; it's a bit as I say a devil's choice but I suspect that most industry would punt for a market based system rather than a tax based system.

And the final point I'd like to make in the comparison of the two systems is that a lot of the complexity comes from translating the theory into practice, so when we were talking about the theory of emissions trading a number of years ago it seemed like a pretty sensible model to take and most of the difficulties have come as we've delved into the detail of that and tried to work out the detail. Now a consumption based model, a consumption tax, a carbon tax, looks very good at a theoretical level and I think for the reasons I've described it's probably a better outcome from an Australian industry's viewpoint but you don't want to underestimate the complexity and challenges and difficulties that you would run into as you develop the detail of that policy over time.

So as a concluding comment I guess I'd like to go back to making that point about the international context. The challenge of what we've got to do with the Australian policy is to come up with a way of reducing emissions that does not cripple the economy. Now on that front the government CPRS proposal is a bad outcome, a carbon tax type model as outlined by Geoff could well be a better outcome but there's plenty of detail to be developed and I also take the points that Brad was making about some of the pragmatism that's there in emissions trading, I suspect the right outcome from an industry point of view, given how far down the path we are, is to make some fundamental amendments to the emissions trading model – thanks.

Michael Porter

I invite Les Coleman from the Finance Department, Melbourne University to comment.

Commentary

Les Coleman, Senior Lecturer, Finance Department, University of Melbourne

Michael thanks very much and thanks for the chance to talk.

There are a couple of themes that came through for me when I was listening to the presentations this morning and three of them really stuck out in my mind and are very relevant to the policy perspective – one is to directly target the objective and a couple of the speakers re-emphasised that when looking at controlling greenhouse gas emissions and it's sort of interesting to think we often lose sight of the simple objectives in many policy debates. The second thing – something close to my heart - is to promote simplicity and efficiency and I teach that students, I practice that in my personal professional life and I believe if we're introducing policy it too should be simple and efficient and the third area it shouldn't get quite so much play but I think is implicit in all the discussion is that the community as a whole has got objectives of sustainable development, they're looking for a type of economy and growth and future that's sustainable however you define that. And as I was trying to combine those themes and think about the proposals that came forward, again three, I sound like a Baptist minister I know with the three themes, but there were three policy perspectives that came through for me –number one – in any policy discussion we should put people first and we should recognise the behavioural aspects and that comes back to this clear idea, or clear drive that people have for sustainable growth, and there are two bases for that – one is rational, quite often people who've got very high net worth are looking for rural properties, luxury environments, pacific atolls, so rising wealth gives us a desire for better environments

and secondly from a behavioural point of view people who are have a sort of progressive policy persuasion, maybe be leftist and so on, have a risk aversion and looking to protect what they have. There are lots of strong reasons why we should be pushing for sustainable growth.

The second thing about us as people is we're very good intuitive modellers, we're very good at sucking data in and working out what's going to happen and we laugh at people like weather forecasters and tipsters and things like that. But one of the things I think that the community is intuitively modelling is the fact that fossil fuel production, fossil fuel consumption is a good proxy for some of the damage it doesn't want to see to the environment, so they're looking intuitively again back to this idea of limiting fossil fuel demand consumption, greenhouse gas emissions, a bunch of proxies out there and they see that as fixing up a whole lot of things – what are they – urban congestion is the classic example; you go to Europe, smaller cars, less cars and that's been achieved by policy prescriptions and I guess that makes it unsurprising but it's very hard for economic models to get any traction, this week alone for instance, we've seen three very authoritative models released and basically disappear with each of their advocates trashing the ideas of the other ones.

The second policy perspective I want to talk about is a lot of hollow assurances that we hear from lots of people on various sides of the argument, it's kind of Kum Ba Yah policy to say you can reduce greenhouse gas emissions without anybody being hurt and this idea of recycling money back and so on it just doesn't work. I agree with Geoff , it's a good idea to get back to basics and the only way to change behaviour, and that of course is what reducing greenhouse gas emissions requires, is either to tax it or to make it illegal, nothing else has worked in terms of controlling anything. Think about reducing problems with the speed limit in Australia, governments didn't sit down and auction off permits to drive at 50 in 30 zones, what makes them think that allowing people to exceed emissions will do exactly the same thing.

We've made tremendous strides forward as a community in controlling environmental problems. I can remember when the Yarra was nothing much more than a sewer and now you walk along it, there's kids playing beside it, there's families having BBQs, there's not just people fishing now but they actually pull in fish, so there are lots of good things that have come from our environmental controls. Environmental problems always have a common good at their heart, clean air is exactly the same whether it's been despoiled by sulphur dioxide emissions or by carbon dioxide and the only policies that have worked are either taxation or making things illegal.

The Carbon Pollution Reduction Scheme, Emissions Trading Schemes in general are hideously complicated and dare I say that's not surprising for something that's come out of the United Nations and diplomatic drivers. They have their meetings not in motels in Dubbo but in luxury locations and if you had a chance to go back to Copenhagen this year and go to Rio for the carnival next year you certainly wouldn't want to reach a resolution either but if you were locked in hotel in Osaka until you came up with a solution I'd bet we'd have a solution pretty quickly.

There's massive uncertainty associated with it and I don't just mean the legislation, the main bill alone is 448 pages and I have a sort of engineering background so one of my queries was how would they work out emissions from a refinery, so I went looking for measuring emissions, there's about that much on it and what it says is, refers you to another Act where it's described and I dutifully pulled that up through the Commonwealth government and it too has a paragraph saying – according to regulations approved by the Minister – a simple thing like the number of tons of carbon dioxide coming out of an oil refinery is not covered in the Act, it's so imprecise that the government in a stroke of a pen could delay its introduction by a year, so where's the certainty coming from when there's huge government overlay. I agree that markets ideally, philosophically are the best way to allocate things and the dead hand of government is just that, but when the dead hand of government is sitting on the markets and driving every part of their supply and demand factors you really don't have freedom of markets and all the benefits.

The third policy thing I want to talk about is kind of back in my history and I have a history in this area. We used to talk about something called 'No Regrets Policies' and no-one talks about that now, no-one talks about looking for a way forward that even if things change we won't regret. International consensus is very, very difficult and Ross Garnaut used the word 'diabolical' to describe policy problems with climate change and I fully agree with that and that's come up here again today. Brad made a comment which initially sounded a little bit defeatists to me but I thought about it and he said he had nothing to contribute to the international debate and I think we have nothing to contribute either, it's almost impossible to make meaningful contributions, we simply don't know enough to act. But I was mindful watching Yes Minister a couple of weeks ago and Sir Humphrey and Sir Arnold were sitting there drinking their ports in a lovely club and so on and they were talking about the politician's lament and Sir Humphrey said; 'this is how it goes, we must do something', and Sir Arnold chipped in; 'this is something, we must do that'. So politicians will be forced to take action – what should they do – no regrets, no regrets actions to me are the way to go.

First of all achieve what we want to achieve which is greenhouse gas emissions, drive it down and I think, to be honest, a tax is the best way to go. Michael and Geoff, Geoff called it a tidier way to go and I agree with that, that does a lot of things apart from reducing greenhouse gas emissions it will help us clean up the urban infrastructure problems we have, congested roads, lack of decent public transport, there's a whole series of spin-offs that come from that.

The second thing we should do is to remove distortions in the current energy market and people in this room know better than most the myriad tax and State and Federal government taxes that apply to different kinds of energy use, different kinds of energy and so on – clean it up – let the market decide what the most efficient form of energy is and I think we should also be actively promoting clean technologies, didn't get much of a run this morning but I think ideas for creating a market and promoting clean technologies are good. But within that don't try and pick winners, don't look for policies that work or expect it to work best, don't look for industries that are expected to work best, put in place some basic objectives, the framework that allows them to be achieved with simplicity and let it go forward.

I'd like to thank CEDA for the opportunity to talk today and thank you for listening.

Michael Porter

So I think we want a 500% tax on first class travel and this could help. Gary Sampson will give the final presentation before the panel discussion and he's been asked to comment generally on these issues but also with a perspective from WTO. Thank you.

Commentary

Gary Sampson, John Gough Professor in the Practice of International Trade, Melbourne Business School

Well good afternoon ladies and gentleman and thank you Mike.

Yes I'd like to talk about the interface between the trading system and the proposals which are on the table at the moment for climate change and the implications of all of this for the World Trade Organisation and it is a good way to bring together a number of the issues which have been discussed because they do emerge when we start to look at the interface between the trading system and measures to control and reduce carbon emissions. The interface comes in many ways and Joseph Stigler for example has advocated anti-dumping duties on goods coming from countries that don't have their own emission reduction schemes that probably many of the subsidies for new technology that have been advocated or adopted by, implemented by governments violate the WTO subsidies agreement that the, though a development agenda is trying to negotiate a sectoral agreement on pre-trade in environmental goods and services, the list goes on, but I'd like to concentrate on three high profile issues.

The first one relates to the competiveness concern, now the competiveness concern comes from the fact that countries have different reduction targets or none at all, they have different time horizons for meeting their objectives and they adopt different policies whether it be an Emission Trading Scheme, whether it be a carbon tax, whether it be a direct regulation or whatever and the result of that is that these policies impact differently on the competiveness with countries, sectors and enterprises within those particular countries. So resources will be allocated according to the policies which are adopted by countries and the speed with which countries move towards meeting their objectives, not for any fundamental economic reasons, common objective reduction of emissions but different policies, this doesn't make economic sense. So what's the reaction to that – the reaction to that is let's use trade measures, let's have border tax adjustment or whatever to level the playing field.

The second concern is the carbon leakage concern – carbon leakage is sort of the old pollution haven trading environment issue where countries will see enterprises moving off-shore to take advantage of less stringent emission control regimes, this doesn't make economic sense, no economic sense. But just as importantly it doesn't make any sense in reducing emissions because if a country has an Emission Trading Scheme or a carbon tax scheme which effectively reduces emissions and the industry moves to countries that don't have those schemes then globally speaking emissions will increase so it's counterproductive and again trade measures are one way that have been suggested to try and avoid carbon leakage, a way to level the playing field.

Thirdly, trade measures have been proposed as a way to punish countries that are not doing enough, if countries are dragging behind what other countries think they should be doing then apply trade sanctions, another trade measure. Now, all of these are important and if you had any doubts about that listen to President Sarkozy of France or former President Jacque Chirac, or former Prime Minister Dominique de Villepin who have all advocated taxes on imports from countries that in the early stages weren't signatories to the Kyoto Protocol, that would include Australia and that would include the United States, or the Waxman-Markey Bill which has just passed the House of Representatives in the United States calls for sanctions on countries that are not doing enough. Now these measures are all trade measures, all trade measures, so the key question there is – can these sorts of problems be resolved, competitiveness, carbon leakage and punishing countries through trade measures, in other words, can the WTO solve the problem – that's the bottom line.

I'd like to just digress for, well not digress, but just say a couple of things about the WTO because it's very relevant within this context. The objective of the WTO is to progressively liberalise trade through a process of negations, it's to put in place legally binding rules that establish rights and obligations whereby the predictability and stability of trade can be maintained or increased, it's a rules based system, it has 153 member countries pretty much all of them who are signatories to the Climate Change Convention. In the WTO the rules are legally binding, there based on non-discrimination and all decisions are taken on the basis of consensus when it comes to changing rules. Rules are not worth anything unless they can be implemented, the compliance mechanism at the WTO is the most powerful of any international organisation, if rights and obligations are not respected the complaining country will take the complaint to the dispute settlement mechanism, this is not a best endeavours organisation but if a country's found not to be respecting its obligations then three things can happen – that country is obliged to change its domestic legislation or it can be legally retaliated against or it has to pay compensation and the sums involved here are simply billions of dollars, AirBus Boeing dispute for example, will end up with a decision that will cost someone billions of dollars.

Also the WTO, this will sound like a public relations exercise, I guess it is a bit but much more than that it's relevant to the role that the WTO is expected to play within in terms of the climate change regime, that since 1950 the volume of world trade has increased 32 times a share of GDP, in world trade has increased from 5% to 21%, there were 22 members of GAT, there are 153 members of the WTO, world trade takes place at 1.5 billion dollars per hour every day. So a stable trading system is critical to revival of the world economy it's as simple as that and what's being discussed at the moment within the context of the climate change regime could shoot down the WTO, sounds dramatic but it's quite true.

What we lose sight of is that the climate change regime and the WTO are very, very different. The WTO has no rules about the environment, it has no rules about climate change and certainly no rules about emission trading or carbon taxes per say, it's job is to avoid hidden barriers to trade. In the WTO governments act unilaterally with respect to their own national interests, that's what Australia has done; it's what we have done in phasing out our domestic action. The climate change is to act collectively in the global interest, as far as the WTO is concerned its objective is to negotiate away government regulations, the Climate Change

Convention is to put in place government regulations. Why would the WTO want to remove government regulations because it distorts comparative advantage, what will happen with the climate measures is to put back in place measures that will distort comparative advantage. What happens if there's a dispute in the WTO, countries don't agree well there's a bilateral dispute, some country doesn't respect its obligation, what happens in the Climate Change Convention is we have a global problem because one country is not meeting the expectations or its own obligations.

Let me just turn to specific examples of where the problems lie when we start to try to use the WTO as a solution by using trade measures to deal with the issues that I outlined. First of all border tax adjustment, now border tax adjustment and when I say border tax adjustment it doesn't matter if it's a tax or it doesn't matter if we have an Emission Trading Scheme, the principle is the same but what's pretty clear is that domestic taxes on products can be imposed on imports and they can be rebated on exports products, no problem, Valued Added Tax, GST, Excise Tax, Sales Tax or whatever, what's totally unclear in WTO law is whether, in fact, taxes on fossil fuels using the production process can be rebated, this has never been tested. Also whether taxes on products included in the production process of the final good can be rebated, what about the taxes on the aluminium that's in the aluminium bicycle frame, now of course there's a problem of finding the carbon footprint to rebate those taxes or to impose the taxes but from a legal perspective, from the WTO perspective this is completely unclear. One of the reasons that the Garnaut Report, the Green Paper and the White Paper all rejected border tax adjustment was precisely that, the difficulty in tracking down the carbon footprint. But over and above that it's completely unclear what would happen within the WTO context if countries tried to rebate the taxes on the imbedded carbon content of goods that were traded.

Another point – most favoured nation treatment – you can't in the WTO discriminate between like products coming from different sources, it's the underlying principle of the WTO. So the objective, for example, of President Sarkozy or for the US Bills is such that it's just not possible to charge a different tax on products coming from China and products coming from the European Union for example, this would violate the fundamental principles of the WTO. They have to be considered as like products irrespective of how they're produced if they compete in the market place, so a ream of paper that's produced with solar energy is exactly the same for the WTO as a ream of paper which is produced a carbon emitting production process, that's as clear as a bell and why – well the WTO just doesn't want to get into the business of using trade measures to force countries to adopt different production techniques and when I say that making exceptions for the climate change concerned can shake the foundations of the WTO, if trade measures can be used to affect the production process in other countries why not have restrictions on hand knotted carpets made by children under a certain age or why not have restrictions on anything that is competing into a domestic market genetically modified organisms, products derived from genetically modified organisms for example. So we'd find ourselves at WTO would be taking decisions on what could and couldn't be legally discriminated against because of the production process and it doesn't want to do that.

Finally a third example is exceptions; of course, exceptions can be taken to protect the environment. Now, there's probably been 450 cases brought to the WTO dispute settlement process, there were 300 brought to GAT only two have successfully argued that they need an exception for the environment, very, very stringent rules apply and what would have to be shown is that if a country was to be discriminated against because it was for one reason or another creating problems for the environment it would have to show that it had an obligation, an obligation one way or another to reduce emissions and what we see at the moment is the countries that would be targeted, like China, India and Brazil, are all exempted under the Kyoto Protocol for emission reductions, therefore, when the dispute settlement process looked at a case like this they would have to look at what the existing law was in other multi-lateral treaties and this way we would put two treaties on a collision course - which one would take priority over the other – just three examples but there are many, many examples of these sorts of problems.

Mike mentioned the, what's happened in Europe, I think it is worth saying that in France for example, what we have seen is a report which has just been submitted to the President which was commissioned by the President from a former Prime Minister of the opposing party, which is in power at the moment, where they have proposed in France a carbon tax on fuels, seven cents per litre on gasoline which is significant and on heating fuels which will add something like 320 Euros per annum to family bills. So the point is that we do find places where or situations where we have a multi-track approach, France is certainly part of the Emission Trading Scheme in Europe but at the same time it's seriously looking at and it seems it will adopt a domestic tax on carbon.

Conclusions – Mike I'll be very brief – firstly the WTO can't fix the problem that's for sure. Secondly – change the WTO rules – you can't, you can't change the WTO rules, they've never been changed, it takes a consensus decision to change them, two-thirds of WTO members have no obligations under the Kyoto Protocol, they're not going to agree to a change in rules. What can happen and this is what Ross Garnaut and the government papers have proposed and that's an agreement outside the WTO, don't bring the problems to the WTO, have a self-standing agreement outside the WTO, of course the WTO has a role to play, a secondary role, a secondary role in seeing what can and what can't be done within the WTO. If there have to be WTO illegal measures, the application of sanctions for example, that are WTO illegal, that can be done but it can be done outside the WTO and there should be agreement on the conditions under which those sanctions can be applied. Now it's not beyond the capacity of governments to make such an agreement, the Montreal Protocol does that, also the Convention on International Trade and Endangered Species violates the WTO, it's not a problem as does trade in hazardous wastes.

So the point is that what is needed here is a coherent approach between different institutions and the approaches taken in very different areas and we have the opportunity for that because I might remind you that the Copenhagen Summit is from the 7th to the 18th December and the WTO Ministerial Meeting is from the 30th to the 2nd of December, these meetings almost coincide, so for governments to have a consistent and mutually supportive approach on how to deal with the trade related problems in the climate change area, the timing couldn't be better – Mike thank you very much.

Discussion Q and A

Michael Porter

Thank you very much Gary, while you work out your outstanding questions and go to the microphones I might just make a comment that what I'm hearing is that all panellists want systems that are simple and intelligible and secondly that there are some things that could be done now that may not involve the CPRS. Would any of the panellists like to comment on the issue that seems to me that the WTO for example, has built about the application of simple, clear principles? The consumption tax is a simple, clear principle, the cap and trades system would aim to be but isn't. What simple things could be advanced now that Australia could do that would be mutually beneficial of the kind that we did when we reduced tariffs, should we be helping, are we doing the carbon storage scheme and so forth – what could we be doing?

Miles Prosser

I'll have a go at that for a start – I'd impose additional taxes on energy, not necessarily large – 5/10 cents a litre kind of thing and I'd use that money to recycle into improving urban transport infrastructure for instance, so that's one thing I'd do and the second thing I'd do is to rationalise taxes and charges and excise and all kinds of things across energy types so that there genuinely is a level playing field between gas and oil and coal and so on around the countryside and I guess the third thing is I think there is some scope for clean technologies and the idea of putting in place targets for that I think is a good one and extending that I think would be a third thing, again they're all no regrets actions – easy to do.

Geoff Carmody

I just want to test my understanding of Gary's interesting presentation. Listening to Gary I think he confirmed what I had thought about what the WTO could or could not do and I drew a distinction between the introduction of a border tax adjustment by country on a unilateral basis. That was a punishment metered out to imports but not replicated in respect of locally produced products. I interpreted that and Gary's later comments about making rules on environmental grounds and so forth being something that WTO wouldn't contemplate or wouldn't readily contemplate. I interpreted both of those comments as being, I might use a double negative, as being consistent with the idea that if it was possible to apply a consumption based approach where the import was subject to the same ad valorem equivalent tax through a consumption based carbon tax or a consumption based ETS as the locally produced product, that would be regarded as within WTO rules, but I'd be interested to know whether I'm just trying to interpret him favourably in my own interests.

Gary Sampson

Thanks Geoff, well if there's a sanction applied to a country because it isn't doing enough this is really not a border tax adjustment, I think that's fairly clear. With a border tax adjustment what's less clear is what can be adjusted at the border and if it's a GST tax or evaluated tax or whatever, no problem, tax on the product but the tax on the process if it's the tax on the fossil fuels which were consumed in the production of the goods and that as an input is not evident in the goods itself then it's absolutely not clear whether that tax can be adjusted at the border. But the point is Geoff that that is something that's open to interpretation, it's never been

tested which just gives me opportunity to make one other point that a lot of the sorts of decisions that needed to be taken as critical as that one, gravitate towards the WTO which is a trade institution with no expertise or mandate to deal with these matters which is why, Mike, I think one thing that we can certainly look towards is some sort of understanding as how to proceed in Copenhagen, get some understanding as to how we're going to deal with these problems. We're not going to settle anything by Copenhagen and Copenhagen is probably going to collapse on the grounds of these trade related problems, so that's one.

Gary Sampson

Can I just tease that out a little bit more, suppose as an Australian I was looking at imposing a tax on an Australian produced widget for which there was competing sources of supply from overseas and I decided I'm Kevin Rudd and they happen to be alco-pops, so I decided one morning to get up and put a 500% ad valorem equivalent tax on that widget produced in Australia, so it almost doesn't matter what the reason for the ad valorem tax imposition is I just decide to do it and then I say simultaneously I will make sure that every imported widget is also subject to a 500% ad valorem equivalent tax, my understanding of the current WTO rules is that that would not be a problem.

Gary Sampson

That's no problem at all.

Gary Sampson

Brilliant.

Gary Sampson

No problem.

Gary Sampson

I've got an idea what you could do next.

Michael Porter

Comments from the floor, I know this is a heavy topic, we have a very heavy volume but John Freeman's got a question.

John Freebairn, University of Melbourne

I guess my question is as much a comment, if we go back to Geoff Carmody's story, Geoff gave us a story you could have essentially four systems and they were split with either you could have a tax or a permit and the base could be a consumption or a production base. It seems to me if you go back and say we have a reduction base and Australia leads the rest of the world, that doesn't make any sense at all, there's an awful lot of carbon leakage and as Geoff said it's essentially a tax on exports and a tax on import substitutes, so enormous industry restructuring. So I think one gets out of that, that a production base is the wrong way to go. A consumption base is a much more sensible way to go – what has the government done with its Carbon Pollution Reduction Scheme, well it's a bastardised mess, it actually

exempts from the carbon tax all traded products and it's left with a very narrow base non-traded products. So it seems to me CPRS is fatally flawed on that basis and the consumption base makes much more sense.

Then you come to the challenge – what is the tax rate I'm going to give on the exports and on the imports. The CPRS model is essentially whatever the extra production cost is to Australians but it's split between if you're a heavy polluter and you get 95% and if you're a medium polluter you get 65 and if you're a small polluter you get nothing or Garnaut says let's work out what happens if all of the world harmonised a scheme. Now if it was just Australia led the rest of the world and all the rest of the world wasn't involved I think that's pretty simple, my real problem crops up and this is Gary Sampson's sort of issue, what if the Europeans have a decent tax system but the Chinese and Americans don't, then Gary's saying I've got to put the same tax on the European product that's carrying a carbon tax as on the Chinese and American one that isn't and that leaves us in one hell of a mess and what it really leads me is to say Australia's bloody stupid to lead before anybody else, you would come pretty close to an impossibility theory, there's no system that makes much sense.

Michael Porter

Comment – Miles.

Miles Prosser

Yeah, I just wanted to pick up on one comment you brought there and Geoff mentioned it as well, the idea that under the CPRS model that there's large sections of the economy that are exempted out of the scheme and we talk about the emissions intensive trading exposed industries and 95% exemption, I think it's worth understanding that there are no industries that are exempted out of the scheme in that sense, there is a reduction in the level of their exposure but to take the aluminium industry as an example, despite the fact that it qualifies as an ETI a range of factors including the requirement to buy some permits, the decay in that permit allocation over time and sections of the activity that are not deemed to be emissions intensive trade exposed leave that industry with an exposure of four billion dollars over ten years. So even where we're talking about sections being excised out of the scheme there is still a very significant cost and four billion dollars is significant enough to drive investment off-shore, so we're not actually even doing that part of the CPRS proposal effectively.

Michael Porter

Question?

[speaker unknown]

I was wondering what the panels view was on the intensity based approach floated by the Federal opposition this week based on the frontier economics analysis?

Michael Porter

So what do we think of the frontier model, Geoff this must look in your territory?

Geoff Carmody

I haven't read the detail; I know they dismissed my model in an appendix by saying that it was WTO compliant so I'm very pleased to hear what Gary said today. I don't understand, it doesn't smell right to me but I'm not sure from what I've heard that the models innards are actually all that transparent. What is absolutely sure is that the, I think it's more accurately described as a base line and credit model but it does have intensity features in it. I think what is clear is that it's a production based model with more extensive caveats than the CPRS and I'm not sure it's much more than that. Oh sorry it also for the electricity sector in affect seeks to price marginal emissions above a base line measured, God knows how, rather than pricing total emissions which is the way the model works for the rest of the economy.

Michael Porter

If anybody wants to be convinced about how complex the CPRS is do read the front of your paper because it's the most complicated document I've ever seen and it is not the sort of thing that you can put to the Mother's Club –David.

David Byers from CEDA

Geoff I just had a question about your scheme and just looking at this from a very practical point of view and maybe get some other comments from the panellists as well. If you look at, let's say Australia did accept your proposal and go down the pathway of a consumption based scheme. Europe on the other hand has got a production based scheme, an ETS which is in place, been in place for several years, and let's assume for example that somehow Waxman-Markey does get proposed and passed in the US and you have, therefore, a production based scheme in the US then, how then do you propose that there would be a knitting together in any kind of global sense of a consumption based approach in Australia together with two very, very different mechanisms in Europe and the US which are clearly going to be far more dominant from the point of view of the insignificance of a global approach to this issue.

Geoff Carmody

Well being a cynic and assuming that the United States does adopt something like the European model, there would be something like 60% of the emissions in both groups of countries which is carved out from their models anyway, most of that will be in the trade exposed sector so I suspect there will be a fair slab of it that can be integrated into my approach without any problems to the extent that traded goods from those countries to Australia are subject to border tax adjustments here offered, the design I'm proposing and there are also hit in the country of origin I'm sure it would be possible, it would be messy, but it would be possible in an a phase in period to negotiate appropriate neutral recognition of the tax burdens paid. We do that with double tax agreements, I hesitate to use them as a model given the amount of time they take to negotiate but you could do that. The easiest thing of course to do would be if you were trading with a country like Australia you take the over taxation of your own emissions into your own hands and zero out exports and then we don't have to worry about them.

Michael Porter

Two questions – first.

Donna Lorenz, AECOM

Thank you for a very interesting discussion today, I have two questions if I may – one of them is – if we were to impose a border tax if that's how it's defined and that is acceptable under WTO rules, is there any thought of what that would do presuming that the reciprocal countries are going to propose a tax on Australian to them imports, we're very emissions intensive industries here – what would that do to imports, to our exports, would it ultimately reduce our exports because we would seem internationally less competitive, I'm not understanding where there might be another outcome internationally?

Geoff Carmody

I'd be very careful to design the model so that every country should do what I'm proposing, every country should impose border tax adjustments on its imports that are the same in ad valorem equivalent terms as a tax is imposed on their locally produced products. The net effect of that applied around the world is that all emissions are covered, admittedly when it comes to imports they're covered in a rough justice sense and in an on average sense because you're determining you're border tax adjustment by your emissions intensity not the imports emissions intensity, but the whole point of this exercise is to get the ball rolling by ensuring that unilateral adoption of a climate policy of this sort is trade neutral, by that I mean export cost competitiveness is not affected and import competing costs competitiveness is not affected in any country. So the whole idea is not to give everyone a leg up or a leg down or worry about precise emissions intensity of imports versus local it's to get everybody on board by taking out of the equation any concern that trade competitiveness is going to be a reason not to act. Does that answer the question?

Donna Lorenz from ACOM

I guess to some degree but we're still presumably going to reduce our competitiveness as long as we're emissions intensive country I would guess.

Geoff Carmody

No, I'm sorry we could be the most polluting country in the world under my model, our exports are not taxed by us, all our imports are taxed at the same rate as matching locally produced substitutes. When our exports, our dirty polluting exports, go to another country say China, if they have my model as well, they tax our exports at the appropriate rate relative to their locally produced substitutes and they zero rate their exports so that way nobody's export competitiveness is affected, nobody's import competing competitiveness is affected and I admit, and no-one's mentioned but I'll admit it up front, this is a rough justice approximation to precisely targeting emissions because on my reading of WTO rules and on listening to Gary I'm even more confident this is not something that we can get into under WTO rules at the moment but it is important, I think, not so much to get the precision of the targeting emissions right at the moment, what's important at the moment is to take trade competitiveness out of the equation so we can get a global deal. Once we've got everybody on board we might have

to do it in a separate agreement outside the WTO but once we've got everybody on board, once we've got credible carbon accounting frameworks around the world then we can talk about the sorts of things you're worrying about.

Now let me just say if Australia adopts a CPRS and we've got a comparative advantage in high emissions energy sources, we don't actually do much for the world economy by adopting that, we just shift our comparative advantage to another country, a competing country with high energy, high emissions resources competing against us. If everybody adopts the model I'm proposing, Australia as a high emissions intensive energy country, we'll actually suffer for the same carbon price around the world, it will suffer a relatively high adjustment burden for two reasons – firstly - comparative advantage associated with cheap energy which is high polluting has been removed globally and so as one of the beneficiaries of that in the past we will pay higher than average costs when that is removed. Secondly - as a high income country with a high per capita carbon footprint to match, any given carbon price will mean that we will pay a higher price because we've got higher emissions imbedded in our consumptions. So that seems to me to be, I'm getting onto another issue which is burden sharing, but it does seem to me it would be a sensible way of saying to the world – forget all this carving up of shares, get a common carbon price around the world, stop carbon arbitrage and the rich countries with the dirty polluting energy sources will pay above total odds anyway.

Michael Porter

I see two more questions, three actually.

Donna Lorenz from ACOM

May I ask my second question?

Michael Porter

Well no, after the others I think perhaps.

Rob Murray-Leach from Energy Efficiency Council

Hi I'm Rob Murray-Leach from the Energy Efficiency Council so surprisingly I'm going to ask some questions about energy efficiency but first a quick statement about carbon taxes. There's a bit of an idea that a carbon tax is going to be better than a Carbon Pollution Reduction Scheme or Emissions Trading Scheme because the ETS is so compromised, you have to address a whole range of these compromises with a carbon tax as well, so the first question is does anybody think that we're not going to need to address the issues of emissions intensive industries and exports with a carbon tax because we'd absolutely have to address that issue as well. The more fundamental question is there's a whole range of market values that impede cost effective energy efficiency, we know that it's one of the very few areas where we can deliver major, major megatons of emissions reduction actually at a negative cost. So overall there's absolutely a cost in emissions reduction but in energy efficiency you've got an opportunity for a very large proportion, the IEA estimate around 54% of emissions reductions by 2030 coming from energy efficiency. I suppose my question was to Les

Coleman, you were talking about a range of measures to be introduced which are really no regrets – did you have any recommendations in this area?

Les Coleman

You sort of made an interesting remark which resonated with me and that is that a tax has to address a whole series of compromises and issues and things like that, it doesn't actually, one of the things that could be done is to face up to the fact that we do need to make some behavioural changes and for those behavioural changes relate specifically to energy consumption and more specifically to carbon based energy consumption. Now every time you walk away from that simple argument you certainly make the solution more complex but we're deciding for political reasons to walk away from that. I'm not an advocate of making, personally not an advocate of making changes to greenhouse gas emissions, but that's a separate debate altogether. If you decide to do that then you really should face up to the issue and go ahead and do it and directly tackling issues has been the most successful way to control undesired behaviour and we're seeing that in Melbourne at the moment, the streets aren't safe according to the police – what do they do –they don't auction off permits to have a brawl outside the pub, they put more cops on the street.

Michael Porter

Last, do you have a question?

David Johnston

I'm just a private citizen in Melbourne, my question is not so much about all the complexity of the detail because I think that still has to, some of it has to evolve still as our understanding grows, my question is more about what's the path forward for Australia to be able to make a decision that's an informed decision. I don't have confidence that in the political process today that the somewhat looming election that that process is going to be sufficiently transparent and clean and understood by the population. I'm also not convinced that the media has enough time and thinking time to be able to digest and analyse all this. So I think that what CEDA's doing is great as a start to get some of the issues on the table but what's the forum or forums or the group of CEDAs is going to help the country simplify the messages, it's so complex. Every now and again I hear little gems of messages that have come out from our speakers, how do we simplify some of these messages and keep the community informed through the newspaper process or the public media in some way, I'd like the panels view?

Michael Porter

Just a comment, a 10% energy tax through the carbon consumption tax is understood and could be the matter for an election, read Frontier Economics and try and work out how you would summarise that and give it to Malcolm Turnbull.

[speaker unknown]

My comment is a bit of a tangent I guess but I think one of the benefits of a consumption approach is that it puts the focus on what is actually driving emissions. Emissions are driven

by consumption of products, producers just produce something that consumers want, I think one of the great advantages of the consumption approach is that it puts the price signal in front of the consumers and that's what the CPRS fails to do, it doesn't put the price signal in front of the consumers, it puts the price, CPRS puts the price signal on the producers, the Australian producers, but it doesn't put that signal on other producers and it doesn't put that signal on consumers because the price doesn't change, whereas, sorry, whereas the consumption approach at least gets the incentive for a consumer to find out more because it starts to have a price impact at a consumption level.

David Johnston

My question was we haven't made a decision yet, how is the community going to be brought along in the next three months, the next six months and understand the issues, not the technical answers from Michael and from, I've forgotten your name sorry, but

David Johnston, Shell Global Solutions

But how is the, what's the process, is it more CEDA forums, what's the grouping of discussions that are going to take place to lead to the answer?

Miles Prosser

I think that helps but there's got to be people talking and there's got to be people listening and I think you're right in pointing out that the political process doesn't help that, particularly the point at which it's at but there are plenty of players in the debate both vested interest and non-vested interest that are bringing a lot to the debate but people have also got to be listening to that and willing to devote the time to listen to it.

Michael Porter

Brad's got a quick comment.

Brad Page

Just a quick comment on that I'd have to say to you that I think we're let down by the media and I have a lot to do with them most weeks, but it's far more interesting for the media to talk about how one side of politics or the other is being skewered over their particular approaches to trying to resolve this issue rather than actually taking the time to sit down and communicate with the masses out there of what all of this really means, and I have to say to you that my experience of the media is that there's some very intelligent journalists out there but they apply their intelligence into areas that frankly are of more interest to them and their editors than it is generally to a grand public service and I think that, I'm personally concerned about the way that the media's communicating much of this because there are some very important issues and considerations for the Australian community in this, most of which are lost through the reporting.

Michael Porter

I've got quite a few hands, one, two, three. We are going a bit over time is that okay?

Ron Ben-David, Essential Services Commission

I'll keep it short – Ron Ben-David – If I could just say that Geoff it's a pity you weren't advocating these views in 1992.

Geoff Carmody

Don't give me that excuse again.

Ron Ben-David, Essential Services Commission

No, no because if we were, no I'm complimenting you because if we were I think the world would have been far further down the track towards an agreement.

Geoff Carmody

If I interject, the only criticism I've got of my model so far is that I'm too late, now that is policy bankruptcy.

Ron Ben-David, Essential Services Commission

I wasn't, anyway, my question comes down to the future and it's the view of the future that we in Australia and our government has and if we believe there is a future whereby the world does get its act together to reduce emissions then the question is to both Geoff and to Brad – if we are developing a scheme, putting in place an interim scheme that effectively shields our private producers then what signal are we sending to them to start the adjustment process and I daresay that both the path that both your models will take us down is something in line with what the CPRS treasury modelling paper shows, which is let's say in Miles's industry, we have aluminium production increasing over the next few years even though in the long term the CPRS modelling suggested it actually has a reduced future in Australia. So how do we avoid sending distortionary messages to the world if, sorry to the Australian producers, if we're doing all of this for the benefit of getting a global agreement whereby we do have to reduce our emissions?

Michael Porter

That's Dr Ron Ben-David who's the Head of our Essential Services Commission but more importantly was, he headed the research panel under Ross Garnaut on the Garnaut Enquiry.

Geoff Carmody

The assumption was that the rest of the world doesn't come on board?

Dr Ron Ben-David

No what I'm saying is we acted a little bit early, we wanted to be sending signals early <inaudible> must start adjusting as soon as possible in a scheme such as yours <inaudible>.

Geoff Carmody

I'd be happy to send those signals to Australia's industry, most of Australian industry production still goes to local expenditure so most of the Australian economy gets that signal,

all I'm doing is making sure that to the extent that we do reduce emissions in Australia if we go a bit ahead of the rest of the world, any reduction in emissions we deliver in Australia is a reduction that counts towards a global reduction rather than one that just takes the form of a shuffling of emissions to another country, seems to me that's a waste of time as well as our jobs, it's no emissions reduction for a significant economic cost.

Michael Porter

CEDA does like to finish on time but this is a diabolic problem and we're allowed an extra five minutes –this is the final question.

[speaker unknown]

Returning from New Zealand after ten years, the problem in New Zealand of course is that Europe wants to hit us with air miles on everything we export to Europe and I'm hearing here that the World Trade Organisation could solve these problems, the World Trade Organisation has not solved the problem anywhere that affects Australia/New Zealand in twenty years and I'm surprised to hear people talking about consumption based taxes when in fact we haven't even entered discussions with the English and the Europeans about getting rid of those air miles taxes that they intend to continue to apply to those of us that are so far from their markets, after all they introduced the carbon tax to ensure that the Americans wouldn't get there product into Europe and have been pretty successful with that. So I'm a bit concerned that at this late stage we're still only now talking about level playing field into Europe and the second thing I'm concerned about is the notion that Frontier Economics have put together a paper which is complicated and nobody is volunteering to stand up and articulate it yet the Minister acknowledges that the Opposition have Frontier Economics Project to put forward and nobody here to my knowledge can even articulate the Frontier Economics Project, that I am very disappointed in.

Michael Porter

Okay, thank you very much, well CEDA's going to keep on this case and thank you all for coming. It is the day after yesterday's debate so it's my pleasure now to ask Frank Toklin to, who is a Trustee of CEDA and from Caltex to propose a vote of thanks – Frank Toklin.

Frank Toklin

Thanks Michael I'll be pretty brief since we have run over time. I might say that Caltex's particular interest in this is that for any particular vintage Caltex will be the largest, single purchaser of permits in Australia, at over 40 million tonnes per annum so we have a particular interest to make sure it all works. Now we also have two refineries which are heavily trade exposed which are potentially going to be damaged by a badly designed scheme. I think we've heard fascinating contest of views, I'm not going to try and pass judgement on it but I found myself, and I'm sure everyone else has been very much informed by that contest of ideas today. There's been a great deal of politics in the last week and many, many proceedings weeks and not much policy. I just have the feeling that whatever the politics delivers over the next few months, the policy debate will go on and I think there is a very serious question as to whether any solution which is found in the near term is in fact going to

be stable over the five to ten year period. So we heard a very passionate exposition from Geoff of his consumption based model with his number one issue being the question of negative protection, that's generally recognised and Geoff's come up with a creative solution. The number two issue as he described of tax versus ETS of course was very well debated as well and Brad gave a very clear defensive of cap and trade schemes in a generic sense, I noticed he didn't necessarily support the CPRS and of course the electricity industry is going to be seriously disadvantaged with the current design. So I found that a very, a very useful counter in one sense to Geoff's propositions, I have my own views but I won't share them with you.

The discussion from Miles took us on a practical bent, talked about the aluminium industry and I think Miles made the point that Australia's role is to demonstrate emissions can be reduced without damaging the economy which I think is a great insight and I certainly learnt a new way of looking at the cost curve and the implications of climate change policies which I found very useful.

Les Coleman took a quite a different stance looking at the point of view of the individual and the consumer and offered some very practical device, practical advice as to how we might reduce emissions which abstracted from some of the heavy theory we'd heard earlier which is not to say there is a problem with the theory but I found it also refreshing that tackling 'no regrets' again might yield some genuine benefits and finally Gary Sampson's discussion of the WTO cleared up a big area of uncertainty for me and I found that tremendously useful and I think I'll take away some valuable messages from there, the number one being don't try and use the WTO to fix this problem.

So I think we've had very valuable contributions from our five speakers, some good questions from the audience and from David Byers and also from Michael Porter some very good Chairing of the session. So that only leaves to me to thank the speakers and to present them with a small gift on behalf of CEDA to mark their very valuable contribution today. So in the interests of time I might not do that handover individually but if I could ask you to all voice a thanks for the contributions I'll hand out the gifts while you do so, thank you very much.

END OF TRANSCRIPT