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STANDING COMMITTEE ON ECONOMICS

**Reference: Exposure drafts of the legislation to implement the Carbon Pollution
Reduction Scheme**

THURSDAY, 19 MARCH 2009

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**SENATE STANDING COMMITTEE ON
ECONOMICS**

Thursday, 19 March 2009

Members: Senator Hurley (*Chair*), Senator Eggleston (*Deputy Chair*), Senators Bushby, Cameron, Furner, Joyce, Pratt and Xenophon

Participating members: Senators Abetz, Adams, Back, Barnett, Bernardi, Bilyk, Birmingham, Bishop, Boswell, Boyce, Brandis, Bob Brown, Carol Brown, Cash, Colbeck, Collins, Coonan, Cormann, Crossin, Farrell, Feeney, Fielding, Fierravanti-Wells, Fifield, Fisher, Forshaw, Furner, Hanson-Young, Heffernan, Humphries, Hutchins, Johnston, Kroger, Ludlam, Lundy, Macdonald, Marshall, Mason, McEwen, McGauran, McLucas, Milne, Minchin, Moore, Nash, O'Brien, Parry, Payne, Polley, Ronaldson, Ryan, Scullion, Siewert, Stephens, Sterle, Troeth, Trood, Williams and Wortley

Senators in attendance: Senators Bushby, Cameron, Eggleston, Furner, Joyce, Milne, Pratt and Xenophon

Terms of reference for the inquiry:

To inquire into and report on:

Exposure drafts of the legislation to implement the Carbon Pollution Reduction Scheme

WITNESSES

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Committee met at 6.52 pm

ACTING CHAIR (Senator Eggleston)—I declare open the second hearing of the Senate Standing Committee on Economics inquiry into the exposure draft of the Carbon Pollution Reduction Scheme Bill. On 11 March 2009 the Senate referred the exposure draft of the legislation to the Senate Economics Committee for inquiry. The exposure draft is based on the government's white paper on climate change, which was released in December last year. These documents affirm the government's commitment to a medium term national target range of reducing emissions by between five per cent and 15 per cent of 2000 levels by 2020 and a long-term emissions reduction target of 60 per cent below 2000 levels by 2050.

The government has released six draft bills for public comment. The Carbon Pollution Reduction Scheme Bill 2009 is the main bill and covers the arrangements for the scheme. A second bill relates to consequential amendments needed to the National Greenhouse and Energy Reporting Act of 2007. The Australian Climate Change Regulatory Authority Bill 2009 will establish the authority that will administer the scheme. The remaining three bills are technical bills in case the charge for the emissions units issued is at some considered taxation. This inquiry will focus on issues relating to these bills. A separate Senate inquiry will consider aspects of climate change policy more generally. This committee is due to report to the Senate by 14 April 2009.

These are public hearings, although the committee may agree to a request to have evidence heard in camera or may determine that certain evidence should be heard in camera. I remind all witnesses that in giving evidence to the committee they are protected by parliamentary privilege. It is unlawful for anyone to threaten or disadvantage a witness on account of evidence given to a committee, and such action may be treated by the Senate as a contempt. It is also a contempt to give false or misleading evidence to a Senate committee. If a witness objects to answering a question the witness should state the ground upon which the objection is taken and the committee will determine whether it will insist on an answer, having regard to the ground claimed. If the committee determines to insist on an answer a witness may request that the answer be given in camera. Such a request may, of course, also be made at any other time.

[6.55 pm]

FARGHER, Mr Ben, Chief Executive Officer, National Farmers' Federation

McELHONE, Mr Charles, Manager, Economics and Trade, National Farmers' Federation

ACTING CHAIR—I welcome the National Farmers' Federation. Would you like to make an opening statement?

Mr Fargher—Certainly.

ACTING CHAIR—Please proceed.

Mr Fargher—Thank you. I am joined today by Charlie McElhone, who is our economist at NFF and for his sins has lead responsibility for this issue. We have quite a lot of issues in this space at the moment as it relates to climate change and then the emissions trading scheme. There are mitigation issues within that and then the legislation under that. As I know you are short on time, and it has been a busy week, we are very clear about focusing on the legislation itself as distinct from the myriad issues that exist around this topic. In the time that we have had, Mr McElhone has consulted with our membership on the legislation and we have a couple of key points. I would now ask Mr McElhone to outline a couple of those key points very briefly and then obviously we will be happy to take your questions on that or any other issue.

ACTING CHAIR—Please proceed.

Mr McElhone—As Mr Fargher said, we are engaging in a work plan looking at appropriate policies moving forward for the agricultural sector. It has been acknowledged that the CPRS is not appropriate for that at this point in time. With regard to the legislation as it stands, we have identified a couple of key issues for the sector. Bearing in mind the timeframes that we have had to work with this, we still need to get more rigor behind some of these positions, but we have an overview of the majority of the key pressure points.

The first one is in terms of the impacts of the bill on our supply chain members. This really comes down to the question mark of the international competitiveness issue of the CPRS. Our indications, at this stage, are that our supply chain members, predominantly the processing sector, will not be eligible for EITE assistance under the current legislation, and that will put significant pressure on supply chain costs and therefore our international competitiveness. A range of figures have come out from various commodity sectors. The red meat sector, in particular, has done some independent studies that have looked at additional costs of around \$63 million initially. Likewise, dairy has looked at additional costs in the range of \$30 million annually. That obviously has real concerns for the agricultural sector, particularly when we realise that the majority of those costs will just be passed back to the production sector in the form of lower prices for our output.

As I said, it is too early for us. We have not had the chance to formulate exactly what sort of mechanism may be available to make sure that that international competitiveness issue is

overcome through this legislation, but it is fair to say that there are a couple of options the industry is looking at and they involve looking at the definition of what actually constitutes agriculture. Likewise, bearing in mind what is happening with the New Zealand emissions trading scheme, and as a minimum making sure that our agricultural sector is not put at a disadvantage to the New Zealand agricultural industries, particularly those which are major international competitors, such as the dairy sector. This is a bit of a moving feast over in New Zealand as well, but our initial indications are that there will be agricultural supply chain compensation, which will also incorporate broader elements of the agricultural supply chain, including processes.

If that is the indeed case—and as I said it is a bit of a moving feast at the moment with their legislative process as well—that obviously has some broader ramifications for how agriculture, in its broader sense being through the whole supply chain, is dealt with here with our own domestic scheme as well. There has been a big focus at aligning with the international benchmarks where they are available. In no other country in the world outside New Zealand is it being entertained that agriculture will be covered within their emissions trading scheme and therefore it is very important from our perspective that there is alignment along these lines.

The second issue is that of land use change. Obviously there are the opt-in provisions with regard to forestry in the bill and the CPRS. Our major issue here and major concerns coming from our membership are about managed investment schemes. We have been open about this from the outset. We would be concerned if there was a double leg up for managed investment schemes and in benefiting from the opt-in provisions for forestry, and believe that it should be explicit about making sure that that does not occur and is not the case.

Senator XENOPHON—I would like to ask about the managed investment schemes.

ACTING CHAIR—We will let them finish their opening statement and then you can question them afterwards.

Mr McElhone—We have some question marks and concerns with this legislation that there still may be additional benefits in addition to what benefits are already there through managed investment schemes through the taxation provisions that exacerbate that land use change issue for us and our members.

The third issue is very explicit within the legislation, and that is the need to align with the international Kyoto accounting rules. We understand there are pressures to align with that, and we can understand in terms of Australia meeting its international liabilities there is an incentive to align with those rules. However, it is widely acknowledged and even acknowledged by our own government that those rules as they stand at the moment are flawed, particularly as it relates to land use and acknowledgement of the things that farmers can achieve on farm and make a position contribution to this issue, but because of the international rules being the way they are it is really inhibiting Australian farmers from making a positive contribution in this area along those lines.

What we would say with regard to legislation is that, while we acknowledge there should be a predisposition to aligning with those international rules, we believe we should not close the door on acknowledging things that can and do make a positive contribution to reducing greenhouse

gas concentrations in the atmosphere, regardless of whether or not they do meet an international accounting construct that we know is flawed. If the intended outcome at the end of the day is about reducing greenhouse gas concentrations, why should we be binding ourselves to a flawed international accounting construct? That is the point. Those are the three major issues that we have identified. As we said, we are working under time constraints. We are trying to provide more information to present to government on this issue, but they are the three major issues as they stand.

ACTING CHAIR—I will ask you a couple of questions and then move on. You said that there is universal recognition that agriculture cannot be covered under an emissions trading scheme due to many impediments, including measuring, monitoring and verifying emissions across 155,000 farms, yet equally that storage of carbon in soils, crops and pastures is a reality requiring greater research and development investment to quantify the carbon capture. What sort of scheme would you like to see in place? Would it be something like a carbon tax?

Mr McElhone—There is still a lot of work to be done on this area. We acknowledge that we do not have all the answers with regard to alternative complementary schemes that are applicable to the agricultural sector. We have floated a number of broad ideas and we are looking at best management practice incentive schemes, linking positive actions on farm by farmers and ‘incentivising’ those through a variety of mechanisms. We are looking at the current environment stewardship programs as maybe one alternative and looking at the taxation mechanism and whether that can be used as an additional ‘ive to drive positive actions in this regard. There is still a lot of work to be done in this area, with more R&D required. It is more when it comes to the sequestration of carbon through agricultural production systems we believe that voluntary market based mechanisms can be developed that do send that positive market signal to farmers.

ACTING CHAIR—A press release you put out on 24 February stated:

With politicians debating the pros and cons of emissions trading versus carbon taxes, greenhouse targets and espousing their respective green credentials one thing they do agree on is that the proposed CPRS simply will not work for agriculture.

What sorts of impacts in terms of quantifiable dollar losses do you see arising from the CPRS if it is introduced?

Senator CAMERON—I would like to clarify what this is. Are you talking about this scheme applying to farming? It is not applying to farming, is it?

ACTING CHAIR—It may do and that is the concern of the NFF. They have concerns about the impact on agriculture, so that is the question that I am asking. There was research released by the Australian Farm Institute suggesting a great reduction in our agricultural exports could result from the introduction of this scheme.

Senator BUSHBY—I will just clarify that. Senator Cameron has raised quite a valid point and that is that the CPRS is not planned to apply to the agricultural sector until 2015 at least. But as I understand it, you see that there will be costs to you before then. Can you outline to the committee what you see those costs will be?

Mr McElhone—We have to acknowledge for cropping enterprises that 45 per cent of their cost of production is fuel and energy dependent. We acknowledge that in the initial three years there will be fuel offsets, but in saying that, once they are gone and even bearing in mind the electricity impact, there will be a significant portion of farmers' costs that will be indirectly affected.

Senator BUSHBY—In other words, fertilisers?

Mr McElhone—We are talking about energy and energy dependent costs. We are talking about fuel, electricity, crop contracting and fertiliser use. There is a range of different cost factors that will be impacted. When it comes to agriculture, we do believe that we are one of the most trade exposed sectors of the Australian economy and therefore our capacity to pass on costs is quite limited at best. Particularly bearing in mind that unencumbered sectors in the current framework will be ineligible for EITE assistance, we are very concerned about the broader impacts on our international competitiveness. Secondly, even taking away those indirect costs, as I mentioned earlier, there are the costs through our supply chain and they include the processing sector costs. Those sectors also being covered sectors have costs, which being realistic about it, are going to be passed back on to the farmers through lower prices. It is \$63 million quantified by the red meat sector and over \$30 million by the dairy sector, just to name two commodities.

Senator BUSHBY—Do those two figures you just quoted relate to indirect costs and not to anticipated costs being applied?

Mr McElhone—Indirect costs from day one of the scheme. If we go into agriculture as a covered scenario, obviously—

Senator BUSHBY—It is a whole new kettle of fish.

ACTING CHAIR—You also talk about research released by the Australian Farm Institute suggesting that agricultural exports, which are worth \$30 billion a year, will be severely disadvantaged when most of our international competitors will not impose an equivalent emissions scheme. Can you expand on that comment?

Mr McElhone—With regard to the Australian Farm Institute figures, they are talking about significant impacts on the bottom line of Australian farmers. The figure, off the top of my head, is up to \$10.9 billion out to 2030. When we are talking about agriculture, as I mentioned earlier, there is no other country in the world that is looking at covering agriculture within their emissions trading scheme, outside New Zealand. Clearly, when it comes to a sector where we rely on the overseas markets for two-thirds of our production, we are quite concerned about what the broader implications are. We have to acknowledge that about a third of our international trade in agricultural goods is from the developing countries, which are not even annex 1 countries within the Kyoto protocol. There is very little expectation on their moving in this space. This is the market that we are operating on.

In saying that, we acknowledge that we have to make a contribution and we want to make a contribution. We want to make a further contribution because we believe we have already undertaken significant practices that have made a positive difference to reducing greenhouse gas concentrations in the atmosphere. We undertake a significant amount of minimum till practice.

There are things like feed supplements and improved genetics, which are reducing methane emissions. There are significant things that we have done, but there are more that we can do. We need to make a further contribution. We know that. The question mark is: what is an appropriate policy mechanism that can draw those positive actions from agriculture? It is acknowledged that the CPRS is not along those lines at the current time.

ACTING CHAIR—You said there is no other country in the world covering agriculture except New Zealand. Does that mean the European Union and Canada do not cover agriculture in their ETSSs?

Mr McElhone—That is right.

ACTING CHAIR—Senator Cameron.

Senator CAMERON—I am interested in a couple of issues. One is the supply chain question. You indicated that some of your supply chain people should have access to the Emissions Intensive Trade Exposed Assistance program. How many of your major suppliers would qualify for that program?

Mr McElhone—Major processes?

Senator CAMERON—Yes.

Mr McElhone—There is still a lot of work occurring in this space. At this stage our indications are that zero would get access to the emissions intensive trade exposed. I misinterpreted the question. I was talking more about who would meet the 25 kiloton thresholds. There is still some conjecture about that, but our indications are, at this stage, that in terms of ET assistance none of them will make it.

Senator CAMERON—That would be because they do not meet the eligibility threshold?

Mr McElhone—That is right. They do not meet the eligible threshold, which it should be said is very focused on emissions intensity rather than trade exposure.

Senator CAMERON—I will come back to a more general question on the issue of agriculture. If Australia does not move, the most recent analysis I have seen is that the Murray-Darling Basin irrigated agriculture will decline by 92 per cent. If the temperature rises by two degrees Celsius then the national livestock carrying capacity is projected to decrease by 40 per cent. Do you agree that this would decimate the agricultural industry in Australia?

Mr McElhone—Those kinds of figures would be quite—

Senator CAMERON—Have you been discussing these projections with government?

Mr Fargher—We have not been discussing those projections as such except to say that we are obviously extremely exposed to climatic risk, as you suggest. Whether it is climatic risk, a shift in climate, climate change, a change in climate then we are exposed because we are dealing with the environment every day and we have been for some time. We have had a drought that

has completely belted our people as well over the last decade and so we have to do more with less. We have been talking to the government about how we can do that and what tools can be applied to agriculture in terms of adaptation, research and development which underpins risk management, better use of water in irrigation communities, new crop management systems, new pastures, new genetics and new varieties.

Yes, we acknowledge climatic risk. We acknowledge we have to do more with less. We are talking to government about what tools we can offer farmers so they can do more with less. The policies that are put in place to mitigate greenhouse, which is what we are talking about now, we want to make sure are appropriate to agriculture. It is not that we turn our back on them, but that they are appropriate for agriculture, which is what Mr McElhorne has been talking about.

Senator CAMERON—Can you comment on the media release that the National Farmers' Federation put out on 5 February 2007. You stated:

What is already apparent is the need to better position agriculture to manage resources in the context of changing climate. On this we cannot and must do wait.

Do you still agree with that proposition?

Mr Fargher—We agree that we need to position farmers to manage climatic risks. As I said, we are trying to, whether it is by research and development to give farmers tools or whether it is through new genetics, new production systems, new technologies, commercially viable adaptation, different crop varieties, looking at diversification on our farms, or looking at the environmental objectives we can deliver through stewardship payments which we have lobbied the previous and current government on and have been successful. Whether it is looking at water technology, water use efficiency or new irrigation technology. Obviously, that is a component of the government's water for the future plan. Yes, we are trying to look at how we position farmers to manage climatic risk and we want to help and not hinder the process of the policies that governments put in place to mitigate climatic risk.

ACTING CHAIR—Senator Bushby.

Senator BUSHBY—I would like to go back to the costs and how this might impact on farmers. We had the Office of Climate Change in last night and I asked them some questions about the impact of the CPRS on those parts of the economy that are not considered ETs, as they call them. Their view was that, because all businesses within an industry that are not ETs—and they were specifically talking about non-trade exposed, but if you are not an ET then it is going to affect you anyway—are treated equality then within Australia it is not going to have a detrimental effect. We have just heard from you that there will be input costs and although they may impact to a different degree depending on the mix of farming that any particular farmer might be employing, would you agree with their contention that, because those additional costs which are intended to be imposed by the system are imposed equally to all farmers, that it will not put you at any disadvantage?

Mr McElhorne—To all farmers globally?

Senator BUSHBY—Within Australia. We are talking about legislation that is going to apply to Australian farmers.

Mr McElhone—When we are talking about international competitiveness we need to see a mechanism that does put us on an equal playing field when it comes to that international exposure. We have concerns that under the current ET provisions there are potential shortfalls depending on where some of the supply chain members fall in that regard.

Senator BUSHBY—You mentioned the supply chain a couple of times. Just for the record, when you say ‘supply chain’, what are you talking about in terms of increasing costs?

Mr McElhone—We are talking about suppliers of inputs into our production system and also the purchasers of our final production and where that goes down through the supply chain.

Senator BUSHBY—How will those entities or individuals within that supply chain be incurring additional costs?

Mr McElhone—With regard to fertiliser manufacturers, fuel distributors and crop contracting, or instance, they will incur an additional price on the emissions that come from their production systems and therefore that is going to increase the cost of doing business for them. Similarly, on the output side with the processing side, there will be a direct cost there for processors with regard to methane from waste water management or additionally through electricity generation through those plants. Right through the whole chain there are going to be additional costs. The question mark is: how is that managed from the international perspective? And making sure that we are being put on an equal playing field. Bearing in mind that the intention of this is to send an appropriate market signal to the domestic consumer and making sure that we are not put on the backburner, which could lead to adverse impacts such as leakage. We are very concerned about that.

Senator BUSHBY—You consider yourselves to be one of the most trade exposed industries in Australia and that has an impact on prices, so you are effectively price takers. How does the domestic market play into that? Is there a relationship between the international prices and the domestic market?

Mr McElhone—Yes.

Mr Fargher—Most of our big export commodities are taking the world price. Obviously, internationally we are a big export sector. Some of our commodities are exporting 90 per cent to 95 per cent of what they produce, and internationally it is also very trade distorted. The most distorted sector of global trade is agriculture. We are very export focused and export exposed. It is a very distorted marketplace. Domestically, of course, there are market power issues. We have 150,000 small businesses. We have several big retailers in Australia. Whichever way you cut that up we are price takers.

Senator BUSHBY—Due to the inputs at both ends that you have described, if your prices were pushed up as a result of the proposed legislation being implemented, you could not pass that on in the domestic market? Ultimately, if you are growing potatoes and you try to sell the potatoes at a higher price to recoup the cost that has been imposed by the CPRS, at some point

presumably potatoes from China or somewhere else would be cheaper for the domestic market and that would cause you a problem; would that be a fair assumption?

Mr Fargher—Yes. As I said, whichever way you cut it, for better or worse, we are price takers and we find it very difficult to pass on those costs. That is just a fact of life for us because we are so export exposed. We need to drive efficiency wherever we can because we find it hard to pass on those costs. Therefore, even though agriculture will not be covered initially, we are affected by cost increases. We have done the numbers on both, and it is not as much as if we were covered, but we are still affected even if we are not covered and we find it hard to pass the costs on. That is the challenge that we have.

Senator BUSHBY—As we heard last night from the Department of Climate Change, the intention of the CPRS is to effectively send a price signal out there that will drive greater efficiencies, use of less CO₂ equivalent unfriendly technologies, and shift markets from emissions intensive industries to less emissions intensive industries. Given that you are price takers, what options do you see that you have as an agricultural sector to actually participate in that? Do you think that most of the efficiencies that you can offer in that regard have already been met or do you see there is technology that you can employ that will help you to offset the costs that your 150,000 small business members will have to wear as a result of this? Do you see any path forward? Is there anything new that you can actually meet?

Mr McElhone—In meeting the costs?

Senator BUSHBY—You have got the costs in place—

Mr McElhone—There are a lot of things that farmers can do.

Senator BUSHBY—I probably did ask a broader question than I intended. You have got the costs that you have described. If that is the case, is there any opportunity for you within the industry to deliver any of the desired outcomes that will help offset those costs?

ACTING CHAIR—Senator Xenophon has to go back into the chamber at half past, so we will just let him ask a question and then head off.

Senator XENOPHON—You mentioned the MISs and the impact they could have. Can you send the committee material in relation to the potential impact of MISs on prime agricultural land, particularly the so-called carbon sink legislation and any concerns that you have in respect of that? You can perhaps comment now and provide some supplementary information.

Mr McElhone—We have done a lot of work with regard to forestry managed investment schemes in particular, so we can provide our views on that. Our main concern here is that it has the potential to add an additional incentive along those lines and therefore add to those land use change issues.

Senator XENOPHON—Chair, I am in your hands as to whether we can get some further information on that, in terms of how it relates to the CPRS. Thank you.

ACTING CHAIR—We will put that on notice.

Senator BUSHBY—In the meantime I might be able to ask my question.

ACTING CHAIR—Just for the information of the rest of the committee, the next witness is schedule at 8.15 so we can go on until that point if you are all of a mind to do that. Senator Bushby.

Senator BUSHBY—I will rephrase my question. Do your members have the ability to absorb those costs? Given that you are price takers and you cannot pass on the additional costs, what capacity do your members have to absorb them?

Mr Fargher—We do not have the capacity to absorb them without doing two things. One is if there are new techniques/technologies underpinned by good R&D and tools where we can somehow look at commercially viable abatement, that could be an option. The place we do not want to get into is where we have to reduce production because of those costs, when internationally competitors do not reduce their production, which may well be less efficient not only in production but in emissions terms to us.

Senator BUSHBY—That is reducing the desired outcomes.

Mr Fargher—That is right. As Mr McElhone said, we have been adapting to climate change, and in many cases what we do in adapting to climate change also has a mitigation effect. We need a lot more tools to give farmers commercially viable options in that regard. If you give farmers tools and they are cost-effective, they will use them. That is why we have been so strong in pushing the R&D angle. But we do not want to get into a situation where farmers do not have those tools. It can often be that they know about them because they have been reading about them in one of their industry magazines, but they are not available, or they are expensive and they are not sure how to use them, so they think, 'It's going to have to reduce production because of the costs', are that is obviously a place we do not want to get into.

We are trying to be constructive about it, push the R&D, talk about the tools, say we want to engage, but we do not want to absorb costs that we cannot pass on and that our international competitors are not passing on. Obviously, we do not want to be in that space in a time when the world needs food and we are good at producing it here.

Senator BUSHBY—You were saying that your farmers do not have the ability to pass it on. Is that going to threaten the viability of some of your members? You mentioned earlier the cost impact on farmers of \$63 million in red meat and \$8 million in diary. When are you likely to be seeing that? Is that something that will be immediately imposed as soon as the CPRS is effective?

Mr McElhone—All this really depends on where the carbon price does go. A lot of the work that has been undertaken thus far is really working off some of the Treasury modelling indications with an initial carbon price of around \$25 a tonne.

Senator BUSHBY—Will that have an immediate impact on costs?

Mr McElhone—Yes.

Senator BUSHBY—In terms of the research and R&D, as worthy as that is, are you aware of anything that might be able to alleviate those costs by the time the CPRS is effective?

Mr McElhone—When we are talking about agriculture we are talking about a biological system. We acknowledge there is an emissions element of our production system, but there is also a sequestration element. When you are talking about the ability to offset, if there was acknowledgement for the sequestration element that occurs through our production systems, there may be some scope to partially offset those additional costs, but that is not there right now.

Senator BUSHBY—You are saying that if your members undertook sequestration activities, or activities that reduced carbon emissions, you would like to see some offset for the costs in the supply chain and other costs?

Mr McElhone—We would like to see acknowledgement of the positive actions that farmers can make to contribute to this issue and the outcomes.

Senator CAMERON—You have quoted figures like \$68 million and \$3 million. What percentage are these extra costs that you have identified in the context of the size of the industry?

Mr McElhone—I do not have that information.

Senator CAMERON—Can you take that on notice?

Mr Fargher—Mr McElhone is around the detail more than I am, but there have been several studies done, which is where we get the figures for those costs, and we could supply them. I am sorry, I do not have them in my head at the moment.

Senator CAMERON—It seems to me that given the size of the industry and the costs that you have identified these are not onerous tasks for the industry because you are not in the scheme.

Mr Fargher—I understand the argument, but certainly our industries are not telling us that. I will have to get Mr McElhone to go through the reports. Our industries are saying, given the structure of their industry at the moment and their integration in the supply chain, that the costs will be significant and they are very concerned about them. Obviously, you are correct in that they are much higher if you are covered, but we are uncovered. The indirect costs and the fact that we are still affected is a concern. In terms of quantifying that per farm and per industry as a percentage of total output of that industry, I do not have those figures off the top of my head and we would have to look at those for you.

Senator CAMERON—Again, on this point, which you may wish to take on notice, is it better for you to absorb some costs now in the short term to ensure the viability of the industry in the long term or not absorb the costs and face this scenario of continued global warming and a massive decimation of the industry?

Mr Fargher—Again, I understand the argument there. I will say this carefully, because I am not saying this assumption is in your question. The issue for us is that, if all the world had the

emissions trading scheme and we therefore had costs and all our competitors had costs then, why were we facing those costs? It is because, like other sectors in the community, if we wanted to reduce carbon in the atmosphere so that we can mitigate climatic risk, that is obviously in our interest. But if we are facing those costs and others are not and where we may be more emissions efficient than they are in some cases, because they might be using a lot of energy on farms in Europe for heating for animals and we might not because of our pasture and open production system, if it is not actually reducing global emissions but we are still facing the cost then obviously our people are worried about that.

There is a disaggregation between do we want to mitigate climate risk, look at what we can do and be part of the solution? Yes, we do. Do we want to do that alone and put our businesses at risk if others are not? Our people are not happy about that. That is the balance that we are trying to come at. As Mr McElhone said, apart from New Zealand, other countries are not binding their agricultural sector under this scheme because of the food production nature, and even if you are bound at the moment we are hit with emissions from dairy and livestock, which is fine, but we are putting carbon back in the soil and we do not get a credit for that. If we do want a credit for that, if there is a bushfire, then we get a liability against that. It is just not an equitable contribution under the scheme and we are not happy about that. We are trying to find an equitable contribution, so we are trying to work with the government to change those international rules. If the international rules are changed so agriculture can get a credit for the work we do and not just our sequestration, and if globally we were binding agriculture in a scheme, then we will back our farmers globally against any farmers. But we are not happy about wearing disproportionate costs.

ACTING CHAIR—Senator Pratt.

Senator PRATT—We have touched upon the international agreements and things like the need for soil carbon sequestration. I would like to chase a little bit more detail about the kinds of things that you would be looking for in the Copenhagen agreement that might see it being viable to bring agriculture into the CPRS at 2013 and which elements will enable that to prospectively happen. I note you also mentioned natural disasters and fires, so you would be looking to see soil carbon included and perhaps natural disasters excluded? Can you flesh that out for us?

Mr McElhone—The first point I would make here is that the international rules are just one of a number of obstacles that have been acknowledged as being in the way for agriculture being a covered sector within the CPRS. It is one, but it is not the only one. There are a number of other ones, including the measuring, monitoring and verification issues, international competitiveness and the land use change issues.

Senator PRATT—I am interested in all of those things. Perhaps we could do the international one and then you might give us a list of the others.

Mr McElhone—I happy to provide details at a later point, but in broad terms it is really about the fact that under the current rules the anthropogenic and the natural elements of agricultural land management are grouped in together. The things that farmers can control are grouped into the things that they cannot control due to natural variability, being the bushfires and the droughts. There is a lot of detail around that, particularly in article 3.4 within the Kyoto protocol, which is the key inhibitor for agriculture. We are talking about farmers globally making a

positive contribution to this issue. That is the first point and there is a lot more detail around that which I am happy to provide.

In addition to that there is a range of other hurdles for agriculture that need to be overcome, the predominant one being the measuring, monitoring and verification of emissions, depending on rainfall, soil types and a whole variety of different issues. We have a multitude of different emissions and sequestration profiles for individual production systems. Therefore, that makes it incredibly difficult, with over 150,000 farmers, trying to get an accurate figure on that. It is a real challenge.

We have also talked about the issue of international competitiveness and how we deal with that and that incapacity to pass on costs. We have talked about the land use change and what are the broader ramifications of land use change and any imbalance. We currently have managed investment schemes. With the carbon pollution reduction scheme we are talking about having an additional incentive towards forestation as a regional land use, and so what are the broader implications for agriculture and indeed the broader policy settings in moving down that path? What are the water runoff and biodiversity ramifications? What are the economic and social ramifications of moving down that path, which are another key consideration? There needs to be acknowledgement for the full range.

Agriculture is a biological system with a sequestration as well as an emissions profile. We should not just look at half the story, which is another issue that needs to be overcome. There was also the issue of complementary policies, making sure that we have a set of alternative complementary policies that are appropriate for farmers and can help them to make a contribution while also helping them to move ahead. The R&D one is also a key element that needs attention.

Senator PRATT—As I understand it, there is a lot of work going on in looking at results and finding a way forward on these issues.

Mr McElhone—Most definitely.

Senator PRATT—How do you think that is progressing?

Mr McElhone—It is the start of a long process. The government has indicated in the white paper that they are prepared to work with industry on a work plan moving forward to make a decision in 2013. We are at the start of that process. There are a lot of issues that we need to address in making sure that we have an appropriate policy setting moving forward. Work has begun. There is a lot more work that needs to be done. We are just working ahead on that.

Senator PRATT—Will the legislation covering agriculture prospectively in 2013 look similar to what we have now? It is the same architecture that is supposed to cover it, but we might need to drill down to some specifics that address the sorts of issues that you have talked about.

Mr McElhone—As to whether agriculture should be a covered sector?

Senator PRATT—No. We are looking at that in 2013. In relation to the architecture of the legislation as it stands now creating agriculture as a covered sector, as you drill down to the

different sorts of regulation you need to govern all of those biological systems, management and carbon accounting. Clearly, you have all the other industries having to look at that very closely, because it is going to be upon them much sooner, but is that still a forward thing for you?

Mr McElhone—Yes. One thing I would say about that is there is still a lot more work that needs to be done to see whether the CPRS will be appropriate for agriculture into the future. We are talking at the moment. Let us not pigeonhole ourselves into one stream. Let us look at appropriate policies to generate positive actions from farmers in this debate.

Senator PRATT—Is that generally how it has been managed thus far?

Mr McElhone—We acknowledge there is a lot of pressure from the rest of the industry for agriculture to be covered within this scheme, because we acknowledge that the broader the coverage the cheaper it is for them to comply. It is fair to say that that has been very much the focus on how can we get agriculture within this scheme to this point. We hope that there will be a turning point within that. Sure, we can look at whether the CPRS can apply into the future, but let us also look at a range of alternative complementary options that can help farmers to make a contribution.

It is at the start of that process. We have gone through the white paper process. We are in the initial stage of the legislation. Now we need to broaden the horizon when it comes to agriculture, as opposed to agriculture being clearly at the moment a square peg trying to fit into a round hole. It is acknowledged that that has been the case to date.

Senator PRATT—That is why you are not in it.

Mr McElhone—How can it fit into the future? If it cannot fit from the initial stage then we need to look at what alternatives are out there.

Senator PRATT—Thank you.

Senator FURNER—Your press release from last month indicates that you have come about with a reduction of emissions of around about 40 per cent over the last 15 years. No doubt farmers had some foresight in realising that is something they had to do for the environment and also the industry to bring about those sorts of results and they certainly need to be commended for those results. I take it you were involved in government in formulating those outcomes?

Mr McElhone—Formulating which outcomes?

Senator FURNER—The outcomes of 40 per cent reduction of emissions over the last 15 years.

Mr McElhone—I am not sure what you are asking.

Senator FURNER—I am asking whether you were involved in government in getting those results of 40 per cent reduction of emissions in the last 15 years.

Mr Fargher—Mr McElhone can correct me about the accounting construct, which is much more around that, but a lot of that change is around accounting with land use change because of land clearing bans, and also mitigation impacts on farms as well. I do not know the numbers as to how much is land use change if you disaggregate them out. In answer to your question, with land use change a lot of that was state based legislation.

Senator FURNER—That is right.

Mr Fargher—In that regard, no, we do not do any state based work at all.

Senator FURNER—Do you have any consultation with state based governments?

Mr Fargher—No. We have state members. They feed up and we do the national work. We do not go into state parliament at all on those issues, which is a good thing at times. To be frank, there has been a lot of angst in our community about the land use change and land clearing issues. We will meet our Kyoto protocols in Australia where other countries are not on the back of that land use change, much of which was done by the farm sector, and obviously they did not get credit for that. That has been a very sensitive issue within our membership and out in the bush. In terms of the accounting construct around it, I would have to look at the figures on how much of it was just land use change and how much of it was other mitigation on farm.

Senator FURNER—How are you now working with government to find further reductions of emissions?

Mr Fargher—If I go back to Senator Cameron's question, we are working with government in terms of what technologies we have that are cost effective and available to farmers that enable them to reduce emissions. As we talked before, we do not want to be in a situation where we have increased costs or a liability and the only way we can mitigate the liability, for want of a better word, is to reduce production when the world needs food. How else could you reduce emissions from a ruminant or from a dairy cow without reducing production? Is there something you can do?

Senator CAMERON—We may not even want to hear about it.

Mr Fargher—Exactly. Maybe you could do something in ruminant nutrition, or feed, or the way you manage your pasture which reduces emissions for those cattle. If you could, is it cost effective? If it is cost effective, is it available to a multitude of farmers? If it is, do they know about it? I think we are a long way from there and that is why we do not want liability coming over us if we do not have those options. You have referred to some of our press releases today. Perhaps not those ones but every other one that we put out is about R&D in agriculture. R&D gives farmers tools and options to adapt and mitigate, and they will take them up. We just need more options out there.

Senator FURNER—That is why you have the timeline to develop those things.

Mr Fargher—And then there is whether it be done by then, anyway. How long is it going to take? Even if it is then done in terms of our ability for soil carbon, will the international rules allow it? Even if they do allow it, will the indirect costs have put so much pressure on our

business that some of those producers will not be there in the interim? Then there is everything in between. If you travel into regional Australia at the moment and raise this issue you will be sitting down in a town hall for about half the day, because there is a lot of angst about it.

Senator FURNER—I have one last question. The legislation provides for farmers to generate permits for carbon sink forests. How can the carbon sink forests be integrated with existing farming practices to help farmers make money out of tackling climate change?

Mr McElhone—On-farm forestry is an option for many farmers. We acknowledge that there will be opportunities for some farmers to engage in the opt-in forestry provisions, and through that mechanism offset some of the additional costs that they will incur for the CPRS. That is an option. There are obviously those opting in to the forestry provisions. It comes with additional considerations for farmers to take on, particularly in light of the uncertainty regarding agriculture and its potential future coverage within a CPRS. Even if you do opt-in to the forestry provisions, bearing in mind to meet the permanence requirements, with the addition of 100 years of those forests being in the ground, and if you were to engage in the marketplace and sell those permits is there a possibility that you may actually need those permits at some point down the track, if agriculture were to be a covered sector and we are going to have a liability ourselves?

Alternatively, there are considerations for farmers in engaging with that with regard to future land prices. Bear in mind that a lot of the sequestration gains will be attainable within the first 20 to 30 years. After that point if you try to sell your property that needs to be factored into the land values and that will have broader ramifications.

These are considerations that we are working through. But in answer to your question, there are opportunities for farmers to engage in this. There are further opportunities for farmers to engage in more on-farm forestry, but in every individual case there will need to be a range of considerations that they will need to go through in terms of looking at the risks and issues around engaging in those options.

Senator FURNER—On notice, can you give us some indication of how many farmers may have already gone down that path?

Mr McElhone—Through voluntary schemes?

Senator FURNER—Yes.

Mr McElhone—I really do not have a defined number for you.

Senator FURNER—Can you get that information?

Mr McElhone—We do not have it.

Mr Fargher—We can try. We can see if there are any studies out there. I am not familiar with any. I would like to make a point very quickly, because I know you are short on time. If you look at the global projections for food and fibre demand, they are through the roof in terms of the growing population, low stocks, increased alternative energy such as biofuel taking away from

food crops, and increased demand for protein, which means more grain. We are well positioned here.

Whilst we are not anti-trees and, yes, there are some farmers that will have forestry that might have opportunities, we do not want to get into a situation where the only option for a producer is to reduce production or go to trees. What about the producer that is mitigating emissions and also has pasture, soil and other management practices? We need to keep those options open, even if we are not relevant to a CPRS. That is why we have talked about complementary measures, because it is not going to do anything to the global emissions challenge. All it is going to do is hurt our food and fibre producers. But I say that in the context of not being anti-trees. We just do not want a distortion loaded up with MIS, carbon sink forests, CPRS opt-in, agriculture out, indirect costs, not the commercially viable abatement, not sure about the R&D options, and international rules that do not work. That is why we are so frustrated about it and we are trying madly to get to terms with this plethora of issues that are facing us.

ACTING CHAIR—We will need to wrap up because I think there is a division coming.

Senator CAMERON—As I understand it, there is a range of opinions in the farming community. One side says, ‘There is no anthropocentric climate change at all’ and there is another view that says, ‘We had better accept the reality of climate change and we should actually be in the system.’ I have heard that view. Is that still a live debate in the industry? Are people still saying, ‘You should be in the system’?

Mr Fargher—You may well think I am avoiding the question, but I am certainly not. This relates to a question you asked before. I need to break that into two. There is a debate about the extent of climate change and agriculture. As I said before, our position is that we work with the environment, and we have a variable climate in this country—probably one of the most variable—and so therefore we need to manage climatic risk. Is it climatic risk, change, a change in climate or a shift in climate? We do not know. We certainly cannot translate all these global projections on farm in terms of farm, seasonal forecasting and what is happening in our region. We would like to, because it would help us manage the risk. Our position is that we do not know. All we know is that it is climate risk. It is something we need to manage and so let us get engaged with policy makers to see whether we can maximise our opportunities and be part of the solution. That is our position. In terms of whether we should be in part of the CPRS—

Senator CAMERON—No. I am not asking you whether you should be in it. I know what your position is.

Mr Fargher—No. I am saying that if there is a debate out there in some quarters. As I understand your current question and the question that you asked before, it went to if you agree that there is climate change then surely you want to be in the CPRS to mitigate your risk. What I am saying is that if you agree with climate change then the CPRS still might not be appropriate, and if our international competitors are doing it and we are not going to make a contribution, anyway, what else can we do. The two are not definitively linked like you suggest. However, yes, there are people in the bush that say, ‘We should be in because if we were in we could get credit for a lot of things.’ We are not sure about that because of the international rules and other things. That is why our position is to work to clarify those issues at the moment. There is a range

of views. Our membership is on the position, and we have come to the position, that a CPRS is not appropriate for agriculture at this time, and the government has agreed with that.

Senator BUSHBY—You mentioned that you had not completed your analysis of the CPRS legislation and how that might affect you. Mr Chair, if they have further submissions, could we accept those?

Mr McElhone—That would be great

ACTING CHAIR—That would be good if you would like to do that. We have a reporting date of 14 April, so it has to be fairly soon. I thank you for appearing. We will have a short break now.

Proceedings suspended from 7.57 pm to 8.15 pm

CAMERON, Mr James, Vice Chairman and Executive Director, Climate Change Capital

Evidence was taken via teleconference—

ACTING CHAIR—I welcome Mr James Cameron, the Vice Chairman of Climate Change Capital, a specialist merchant banking group, and who is on the phone from London. Would you like to make an opening statement?

Mr Cameron—Yes. I will make a very brief opening statement, but I would like to reserve as much time for your questions as possible. I have not submitted a written statement to you, so I will just make some general observations to begin with.

ACTING CHAIR—Please proceed.

Mr Cameron—Thank you. My first point is that what you are doing through this process is of interest to the rest of the world. You should not see your work in isolation from the efforts that other governments are undertaking to put in place their own legislation or indeed to prepare for the multilateral negotiations that are taking place during the course of this year, culminating hopefully in agreement in Copenhagen at the end of the year.

The second point is that the Australian ramification of the Kyoto protocol was a significant moment in the multilateral negotiations. It brought a sense of hopefulness to the negotiations that it will be possible to get a global agreement with all the significant parties involved, and that Australia could join in the multilateral process and lend a hand in bringing together, for example, the US, China and other countries with whom Australia trades in Asia. Of course, all governments face difficulties in connecting what they agree internationally with what they do domestically and this feeds back into their credibility when they negotiate with other states. The climate change problem is probably the perfect example of a collective action problem where the actions of a single state cannot possibly protect citizens from the effect of worst consequences of climate change. Whatever Australia does within its own borders makes very little difference to the risk experienced by Australian citizens. Australia needs to do what it must within its own borders but obviously agree with others to reduce global greenhouse gas emissions. It puts a real premium on the credibility that you bring to the negotiating table, so what you are doing with your own legislation is of profound importance to the future outcome of the global agreement and people are paying attention to your efforts.

It is also important in negotiations, as in the development of national governmental responses to climate change, to maintain momentum and so that any delay in the implementation of this proposed legislation would be problematic. It is much better to get legislation through, even if it is compromised, than not to. I very much took that view when I was a negotiator of the original framework convention, when I represented the alliance of small island states. There was a point when we had to consider whether the agreement was good enough and whether the small island states that represented a significant membership in terms of votes but very small populations of course should agree to the 1992 agreement on the basis that it was too weak to deal with the problem. Ultimately, of course, it was better to agree for all of the institution and progressively improve the level of obligation, because the small island states have no hope whatsoever of

protecting themselves from climate change without the efforts of others. An international agreement binding in law to constrain global emissions was obviously in their national interests.

We also have a strong sense of urgency that comes from the scientific community on when the science is properly understood. There is evidence requiring governmental intervention. You also have perhaps another purer example of what government is for. The citizen is not in a position to be able to assimilate all of the scientific evidence and act in a rationale way to protect their interests; the government must do that for them, which obviously is a matter of political philosophy, but the understanding of the problem and the need to act should not in any way separate political parties. They should understand that this is what government must do.

Likewise, when one understands the role of business and industry leadership is required there, too, and many arguments here in Europe and in many jurisdictions from industry make the case for competitiveness as a reason for inaction in a way that does not seem justifiable to me. Our experience here is that industry has consistently exaggerated economic risk through the intervention of government—for example, putting a price on carbon in Europe. As a consequence, they have been over allocated. No provisions were made for decline in industrial output that we are experiencing at the moment and in most instances the competitors' arguments are not well founded.

I have noted what you have done. I have read the fact sheets. I have not read the whole of your report; I have not had the time, but I have read the exemplary fact sheets. Other governments really ought to do the same to explain what is going on to their citizens. I hold the view that any business leader who wants to play a competitiveness card and suggest that perhaps they would move their business offshore if they were faced with an obligation to reduce their emissions that might be costly in transition should anticipate very close scrutiny from their own peer group first but also from their employees and from their fellow citizens. In fact, what they are saying is they would prefer not to take the responsibility as a member of society to reduce their emissions, to take their business somewhere else and freely to admit that which will cause harm to their own citizens. I cannot see that as evidence of leadership of any kind. I regard that as weak.

Really what you and your colleagues need to do is to listen to the scientific evidence, acknowledge the responsibility of government to intervene, choose the methods that are best suited to enable rational economic decisions to be made so that reductions can be made at lowest cost and lowest social cost, and resist the arguments of those who would delay, who would make affectionate the enemy of the good, as many in the environmental community do, and those in the business community would argue that they cannot manage a price for carbon and they cannot compete in a world that must adapt to reducing greenhouse gas emissions, and who have not got the strength of leadership to set an example and manage risk within their own borders.

Finally, it is the case that governments all over the world are grappling with severe economic difficulties at this time and arguments are being made that this would not be the right moment for additional costs to be imposed on industry that has a high carbon content. On the contrary, this is a very good time for bringing together economic and environmental policy. It is a good time to make long-term investments. Asset prices are low. Interest rates are low. The capital costs of the clean energy infrastructure, which we must invest in around the world, are lower than they have been for some time. The operational costs in many renewable energy sources are lower themselves, but they have to overcome capital costs hurdles. This is the ideal moment to

do it. We also have relatively low savings rates in our Western economies and now would be a good moment to enable savings to be made more productive in the economy perhaps through the issuance of bonds. That is perhaps something we could return to in questions and answers.

My impression from the political leadership in the US and in some of other parts of the world is that it is not only possible to connect an economic stimulus package with clean energy infrastructure investment; we have a very significant opportunity to bring together our climate change and economic policy and make long-term investments today to increase jobs to provide better protection for our citizens in the future, and to enable any more rational transition to a lower carbon economy, which will be lower risk for our citizens. I reject the idea that this is a bad moment for regulations such as this and would encourage the committee to think very constructively and positively about the opportunity that exists to make these long-term investments.

ACTING CHAIR—Senator Cameron.

Senator CAMERON—Thank you for calling in. You have described the factual situation in Australia. We are facing more and more critique on the carbon trading scheme on the basis that it is not the right time to do it, that jobs will be lost and that carbon leakage will be the result of the scheme, resulting in further job losses in addition to the job losses with the global financial crisis. Could you comment on the other side of the equation that I do not hear much about but that you have raised, and that is the alternative in terms of green jobs and where they would come from, how many you think there could be and what sort of investment would be involved in creating the positive aspect of reducing carbon in the atmosphere?

Mr Cameron—Certainly. One of the roles I have is to sit on the board of General Electric's 'Ecomagination' venture. We aim to have some discussion on that board of the job opportunities that are available through investment and renewable energy. Whilst I cannot give you numbers that would be really all that relevant to you in your inquiry I can give you some general principles.

It is certainly the case that, if you look at the jobs created per megawatt hour from renewable energy, you will see a relative increase in fossil fuel production. If you look at the business of implementing energy efficiency in the home, in factories and in office blocks there are significant labour opportunities in that enterprise. There are various governments that have made estimates. You can call upon the US government's estimates of job creation. The British government has made some estimates. I cannot vouch for them. I just know that there is a confidence that there will be positive job creation associated with the implementation of policies associated with reducing greenhouse gas emissions, encouraging energy efficiency and renewable energy generation.

In the serious packages there is clearly a lot of focus on infrastructure development. The main reason for that is job creation and to create lasting assets of value to an economy that the public can justify public expenditure in. Whether it is building rail infrastructure or modern smart grids for towns and cities, or simply reworking the waste collection system so it is a source of energy, these are all employment generating activities. What I can say from the experience we have had so far with the carbon market is that it has generated returns on investment. It is a good investment to make both in public policy terms, because it reduces greenhouse gas emissions,

and in financial terms, because of the creation of intelligent public policy. The Kyoto protocol has enabled significant investments to be made in reducing greenhouse gas emissions and through the European emissions trading system value has been generated through investment projects around the world and indeed in Europe. Our economy has not suffered by absorbing a cost for carbon. It is a relatively modest cost at this stage, but we are not suffering as a result of absorbing the cost of carbon. We are not experiencing significant competitiveness issues in any sector, even those most exposed to international competition, such as some chemicals within the chemical industry. On the whole people do not move their businesses for these reasons. Labour costs are a factor, of course. Other reasons for the attraction of labour to a particular geography do matter—tax breaks and the like. But carrying the cost of carbon is not a significant factor. We have managed to grow our economy in Europe in recent times despite carrying a carbon cost. When we accidentally lowered our carbon profile to switch into gas in the UK we did not experience any decline in growth.

Many of the contentions that deal with climate change—which after all is an imperative; it is not a nice to have option, it is something that we must do—do not cause economic dislocation. It does not lead to significant movements of businesses out of a jurisdiction. It is not an impossible load to carry for an economy. It does stimulate investment, which does produce returns, and it does encourage the growth in new enterprises. Our business is an example of that. It is a small example, but it is significant in its own way. We have raised money in this business to invest in a whole range of low carbon technologies and businesses through very substantial pension funds and institutional investors who are looking for financial returns. They are not simply looking to do good things for the environment. They are looking to blend the two.

Senator CAMERON—There have been witnesses before this committee who have argued that because we are a small country contributing 1½ per cent of pollution that we should not lead the way. The coal industry is also arguing that we should not be involved until 80 per cent of the coal industry worldwide is involved. I am afraid we have a division on, so I will need to hand back to the chair.

ACTING CHAIR—Unfortunately, this is Parliament House and you can hear in the background a buzzer, which means there is a division in the Senate. We are going to have to leave, but if you are gracious enough to hold on, we will be back in about eight minutes.

Proceedings suspended from 8.33 pm to 8.43 pm

ACTING CHAIR—We will resume. We will go back to Senator Cameron's question, unless you have answered it on the record.

Mr Cameron—No, I have not and I would like to be able to respond to it.

ACTING CHAIR—Please proceed.

Mr Cameron—My first observation is that Australia is not taking the lead. Australia is following the actions of others and it is certainly not acting alone because the European Union is several years ahead, other governments have put in place national legislation that is broadly equivalent, and you see in the US, finally now in Canada, Japan and indeed in many of the developing countries, China included, significant efforts to reduce greenhouse gas emissions through a variety of methods. It is quite possible that after the Copenhagen agreement and perhaps in, say, six to nine months, following through with some more detailed rule making, that not only is there a new multilateral regime that includes a carbon market or at the very least a set of rules that value carbon that enable governments to build markets in reducing greenhouse gas emissions, but that there are several domestic markets in operation that will learn over time how to connect with each other and Australia will just be one of them. The argument that Australia is taking the lead is simply not correct.

As to the coal industry's arguments, they are familiar. They have been made in every other jurisdiction that has thought of regulating greenhouse gas emissions, for obvious reasons. The Australian coal industry situation is not different from that in Germany or the US. Clearly, the numbers they have focused on include many developing country producers and users of coal—India, China, South Africa and the like—and there are very good reasons why obligations are separated between developed and developing countries. The Kyoto protocol and the framework convention on climate change, which Australia is a part of, has for a very long time accepted the principle of common but differentiated responsibility and it makes sense for the time being for India and China to be taken out of an obligation to reduce by absolute amounts their emissions and to be the recipient of investment to reduce emissions through the clean development mechanism and other devices, which will enable us to begin the process of building the correct balance of interests in a collective action problem solving effort, which the Kyoto protocol and the Copenhagen agreement that will follow it are designed to do.

It is also the case that whatever we do at the multilateral level is likely to be insufficient. Even if we have a very successful outcome in Copenhagen and goodwill breaks out all around and we have a tough agreement to reduce emissions it will still be necessary for governments to do more than that, because it will be insufficient to meet the targets that are being suggested by the consensus in our scientific community.

ACTING CHAIR—I would like to ask you some questions about European experiences. Did European countries introduce compensation packages for households when they introduced an emissions trading scheme? If so, what form did they take and did they apply only to low income earners?

Mr Cameron—Not in that form. I do not think I am able to tell you whether there are any examples in individual member states that could be characterised as compensation. In looking at the UK experience, no, it is understood that there may well be a consequence in the price of power purchased by a consumer. There are initiatives in abundance to try to mitigate that. Not all of them have been very effective to date because often they are done on too small a scale. Encouragement for households to put in place their own renewable energy systems or insulation to reduce that demand has been there but perhaps not rolled out in a very effective way. We have an issue here that we call fuel poverty but which is really just poverty in another name. There is no doubt that is of great concern and, sadly, there are still many people in an impoverished state who find it extremely hard to absorb any increase in costs associated with the energy they use, and often they are in housing that is very poorly insulated. Ironically, some of the best building stock is in social housing run by housing associations. Private rental and private homes are often in a poorer state. But government is exercised by the problem of increased energy costs. If they are passed through to the utilities then you have the obligation to reduce their emissions and it is looking to compensate that in a variety of ways. In this country it comes in the package called fuel poverty and is not quite described in the way that you did in your question.

ACTING CHAIR—How important has nuclear power been in European countries in restraining their emissions?

Mr Cameron—It is vitally important in France, which has built significant capacity in nuclear power. It is much less significant across the rest of the European Union. It is of political interest because it is often argued that nuclear power provides a low carbon solution to base load power generation and then that requires governments to argue for or against it, and it requires the investment community to determine whether it is a good or a bad investment, otherwise the plant will not get built. There are so few examples of power stations built with nuclear technology with private sector money; they are almost all state owned, state subsidised, all the way through to the reprocessing of waste. There are almost no examples of privately financed nuclear power generation. The benefit that particular sector could receive from a carbon market is mitigated by the fact that there is not a significant amount of investment attracted to the nuclear industry at all at this stage.

ACTING CHAIR—Finally, what has been the Scandinavian experience with carbon taxes? Would you like to comment on that?

Mr Cameron—I cannot claim expertise on the experience within Sweden, but of course people do look to the Swedish experience as an early example of putting a price on carbon. The standard analysis would be that where you have quite a high level of political consensus about the environmental problem, as you do in Sweden, and where you have quite a small population for that area, and an economy that is reasonably sound and healthy you can make a significant contribution through carbon taxation but you will never get through taxation an accurate measurement of the tonnes of carbon that you reduce in order to meet a volumetric target set by an international agreement or a scientific consensus about where the safe levels are seen to be concentrated in the atmosphere.

The trade-off you are making between taxation and a cap and trade is largely through the effectiveness of the instrument at reaching the parts of the economy that need to change and your capacity for measuring your progress along the way. On the whole, a cap and trade system

enables you to accurately respond to the scientific evidence about the tonnes of carbon that need to be reduced through a volumetric system and bit by bit tune it to the level of effort required to reach those targets, and that does not happen with a taxation system.

A taxation system, on the other hand, does help you reach deep into the economy and where there is price sensitivity affect consumer behaviour. Often there is not and consumers do not change their behaviour; they just absorb the cost. I think the Swedish example is interesting because they were early and determined to make some kind of contribution to dealing with the problem. They have a very interesting and harmonious society that enables them to combine this form of taxation with a cap and trade system that came later that is fixed upon their power producers.

ACTING CHAIR—I would like to ask you about carbon leakage. Do you regard that as a serious problem? If not all countries introduce emissions trading at once will industry move to the countries without it and so global emissions actually will increase as a result of some countries introducing emissions trading? That is a concern in Australia.

Mr Cameron—It is a highly complex issue and it needs really careful analysis. I am unimpressed by the idea that businesses move from one jurisdiction to another because a modest price of carbon is imposed by a government in the public interest. I would very much like to see the farewell speech of the business leader to his or her staff saying, ‘We’re leaving the country to set up offshore because we cannot carry the obligations to reduce our emissions within this jurisdiction. We are going to carry on polluting and thereby creating risk to your fellow citizens. By the way, you’re losing your jobs too.’ I just do not regard that as a plausible argument and I would very much like to see the CEOs make that speech and then wave them goodbye at the airport.

There is, of course, a problem associated where manufacturing takes place. One cannot deny the fact that over time one has to address the emissions taking place where the bulk of the manufacturing takes place. That is a matter for international agreement over time and it is not an argument for inaction for those countries that can afford to and must make reductions today.

ACTING CHAIR—Senator Bushby had a question on that, and then Senator Pratt.

Senator BUSHBY—I would like to follow up on the question regarding carbon leakage. With respect, I think your answer was a fairly simplistic answer to what is, as you acknowledge, a very complex matter. It is not just a matter of established businesses that may choose to uproot and move to another country because they do not like the carbon costs that they have to wear here. There are also issues of goods that are being sold in Australia that become more expensive when produced by local producers being substituted by those being produced overseas where they do not have input costs. Similarly, there has been a lot of discussion by companies such as the cement industry and others over considering developing their current interests, but because of the costs and therefore the viability of doing so in Australia they may choose not to, in which case producers of other countries will then be importing the needs that might otherwise have been produced here. There is a whole range of ways that carbon leakage can occur. I agree with you, to some extent, that the likelihood of existing businesses uprooting purely because of the additional costs is unlikely, but there are a lot of other ways that carbon leakage can occur as a result of something like this.

Mr Cameron—I fully accept that and that is really why I prefaced my remarks with the observation that this is a complex matter and cannot be reduced to a sound byte. However, I am also aware that the leakage arguments and the competitive arguments are used to prevent legislation being put in place and to make legislation less effective than it should be. Those arguments need to be robustly challenged, because they very rarely stand up to scrutiny.

I will come back to the cement case in a minute because I think it is very interesting and a compelling one to look at in some detail. I grant you that through international trade it is inevitable that goods will be imported into a country from countries that have lower or different standards and are not carrying a carbon cost that is equivalent to that in, say, an OECD country. But there are means by which that can be addressed. At the moment they are modest, but they are not insignificant. One of the reasons why the clean development mechanism exists in the Kyoto protocol is to enable investment to be made in lower carbon development. When we make an investment in a steelworks in China to capture waste heat, that steelworks still produces steel and the Chinese economy still uses it, but there are lower emissions. We pay for that and we get an investment return from that because of an obligation to reduce in Europe. But it is in our interests, as European citizens, that those kinds of carbons get taken out, and it is a price worth paying. It becomes important for our industrial relations and the connections we can make with a very significant economy to Australia that is going to be a major power in the world for decades to come. If we bring investment to that country and lower the carbon profile of its development we are building important industrial relationships—business and commercial relationships—that will last and we are solving a problem together.

The counter to your argument is that it is not a justification for inaction. There is not a justification for bowing to threats of leaving a jurisdiction like Australia to set up overseas. There is not a justification for penalising China for the development of its products today, but there is a major collective action problem that needs to be worked on over time, and bit by bit one hopes the standards start to converge.

As to cement, that industry needs to be placed under pressure to find a lower carbon way of producing their product. It is not sensible to be shipping cement long distances. It means that the transportation costs are not being properly costed to their carbon content. But there is not an easy solution. If a cement industry wants to leave Australia on the basis that they cannot carry a carbon cost, that might be an executive decision that someone is prepared to take, but if there is sufficient demand in Australia for cement it would be sensible to produce it there.

Senator BUSHBY—On the cement industry, I have seen evidence—and it has not come before this committee yet, but I imagine it will—suggesting that for every tonne of either clink or cement produced in China there is seven times the CO₂ equivalent gases produced than for the same amount of cement produced in Australia, highlighting that Australia is a far more efficient producer of cement products in terms of carbon dioxide equivalent emissions than China currently. That feeds into your comments earlier about China, with which I do not disagree in principle.

Mr Cameron—That is a very good example. Australia has a superior technology for cement and China has an enormous need for cement. At some stage the superior technology will have a very large market in China. Bit by bit that market has to be created. Whereas today the carbon content is not really that interesting to most Chinese consumers it will be over time. At the

moment we make investments in cement manufacturing in China—in fact, we have done several in Hubei Province—where we capture waste heat from the cement manufacturing process, and tonnes of carbon are reduced by so doing. The governor of that province is extremely impressed with that kind of investment. More will follow thereafter. Eventually, that technology in Australia will have a larger market because it is lower carbon than it currently does, including places in China.

Senator BUSHBY—I think you are talking about a timeline there that probably would not satisfy Senator Milne, who has just arrived. Correct me if I am putting words into your mouth, but I understand your view to be that we need to take action urgently, and allowing something to happen gradually over time may not satisfy that requirement.

ACTING CHAIR—We are running out of time.

Senator BUSHBY—I will leave my questions there.

ACTING CHAIR—We will go to Senator Pratt.

Senator PRATT—Clearly, we are in the middle of a significant global financial crisis and there are mass job losses happening around the world, which is feeding a lot of fear and anxiety. Of course, that is feeding mounting concern about additional job losses caused by the extra liabilities under a carbon pollution reduction scheme. However, I am concerned that not resolving this issue will create uncertainty in investment decisions as people start to look to reinvest and look towards coming out of this financial crisis. Failure to resolve this within Australia will actually slow recovery. How would you respond to that statement?

Mr Cameron—Your analysis is correct. Uncertainty is a killer for investment. Clarity really helps, even if the rules are in some way compromised and not everybody gets what they want and the reduction targets are less than you would expect if you really study the scientific evidence. It matters to have agreements, to set parameters that investment can work with and have them last a long enough time for investments to be made at scale, especially in infrastructure. I take the view that there are significant investment opportunities around the low carbon economy. Evidence so far from our experience here, not least in this company, is that they produce good investment returns. If a government can provide additional incentives for investment in the movement away from high carbon to low carbon, because there is so much money invested in the high carbon systems and so many subsidies that already exist in that world, then capital will flow in significant amounts into the new clean energy infrastructure of the future, which will create jobs and is frankly the way to manage risk for an economy over the longer term. I regard your observations as sensible and I would encourage the committee to think positively about the investment flows that will come from this legislation being bedded down and implemented.

Senator PRATT—Thank you.

ACTING CHAIR—I would like to ask one last question. How would you view the working of the proposed Australian model? Is it a Ferrari or a Morris Minor?

Mr Cameron—I am not sure that it can be described as a Ferrari, because it is not very quick off the mark. On the other hand, I think it is quite well designed. I think the design of the scheme is intelligent and thoughtful and has been put together over many years. I know some of the origins of this. I think the designers need to be congratulated on the effort put into its construction or architecture, but I do not think the level of ambition is far enough. I am not convinced that it will change behaviour soon enough. I think it has been too generous to vested interests in the high carbon economy, not sufficiently encouraging of innovation and investment in low carbon technologies, and wasteful of the tremendous natural resources Australia has in renewable, where the transition to the lower carbon economy could release tremendous business creativity if the rules are set in such a way as to encourage capital to flow into the economy from within and from outside. Speaking for ourselves, we would be delighted to invest in lower carbon technologies in Australia, but at this rate it looks like it will be a while coming.

ACTING CHAIR—Thank you for appearing before the committee.

[9.07 pm]

JOTZO, Dr Frank, Private Capacity

ACTING CHAIR—I understand you have just flown in from Copenhagen, so notwithstanding your jetlag we are very pleased that you have been able to come here tonight and thank you for doing so. Would you like to make an opening statement and then the senators will ask you questions.

Dr Jotzo—Yes, I would. Thank you very much for giving me the opportunity to speak to you tonight. Thank you for your concern about my jetlag. I am feeling quite well actually.

I would like to say a few words about me so you know who you are dealing with. I am an environmental economist specialising in climate change economics and policy, including emissions trading design, but also the Kyoto protocol mechanisms and options for post-2012 international climate change agreement. I have worked on those issues for about 10 to 11 years. Currently, I am a research fellow at the Australian National University and also a deputy director of the ANU Climate Change Institute. I spent most of last year working for Professor Garnaut as an economic adviser on the Garnaut review. I have a PhD and masters from the ANU and an honours degree from Humboldt University in Berlin. Germany is my country of origin; I came from there about 11 years ago. I previously worked for ABARE, the Australian Bureau of Agricultural and Resource Economics, and I have collaborated and worked as a consultant for various international organisations.

My comments today are of course on the exposure draft legislation. I understand that some of the provisions in the white paper are not fully reflected in the exposure draft but would instead be implemented by regulation. The comments I am about to make refer to the whole package, so the white paper provisions as a whole and not just what is in the exposure draft.

Please indulge me to comment briefly just on five separate issues to start with. The first issue is the target range. It is a five per cent to 15 per cent proposed range for 2020. There are a lot of perceptions out there in the community and public debate that these are weak targets. I do not think it is correct to characterise them as weak, because they should not be seen against a benchmark of zero but against an increase compared with year 2000 or 1990 levels. We projected it to be around about the Kyoto level of plus eight per cent by 2010, and there is a strong underlying growth in Australian emissions. Any kind of reduction would imply a significant effort by 2020.

Nevertheless, the range of five per cent to 15 per cent is obviously outside the range of 25 per cent to 40 per cent reduction around which the discussions under the UNFCCC and the negotiations are revolving. According to many analyses, including that by the Garnaut review, it is not enough of a contribution for Australia to be compatible with a truly ambitious global agreement to mitigate greenhouse gas emissions. In my view, having the option of a 25 per cent reduction or thereabouts at 2020 on the table would make sense, seeing that it can be computed as somewhere like the fair share that Australia would contribute to an ambitious global

agreement—that of course being more and more realised as Australia's true national interest in a climate change debate.

There is also a perception that I have sometimes encountered that a more stringent Australian target means a higher permit price and therefore a higher cost of emitting in Australia. To a large extent that is not true, because of the open trading regime that is being proposed. Australia will be a relatively small player in international carbon markets, meaning that demand at home will only marginally affect the permit price internationally and a more ambitious target in all likelihood and primarily would mean that Australia would buy more permits or more credits overseas, in particular from developing countries, and thereby do more to support mitigation efforts in developing countries. It would, in all likelihood, not materially affect the price that Australian polluters will be facing.

The second area that I would like to comment on is the provisions for free permits for trade exposed emissions intensive industries. That is the issue of carbon leakage and how to prevent it. As an economic principle it is quite valid to state that there should be no free permits given. Pricing the externality of greenhouse gas emissions should in fact be reflected in company's bottom lines, and that principle most certainly applies to industries that produce for the domestic market, where there will be a large opportunity to reflect any cost increases because of carbon permits in the costs charged to consumers, for example, in the electricity industry. The picture is different, of course, for trade exposed emissions intensive industries, especially during the period where emissions pricing applies only in some countries. There is a concern to avoid carbon leakage.

The problem with the formula chosen in the draft legislation, in the white paper, is that it is a fairly simplistic approach that, in many ways, is highly problematic. It gives a fixed share of permits—90 per cent or 60 per cent—solely on the basis of a particular economic activity being emissions intensive and for producers who export or are exposed to competition from overseas producers. The amount of free permits that a firm would get is in fact directly linked to production.

There are problems with that. Firstly, the substantial share of the total permits is being allocated for free and that share is set to rise over time without any upper bound to the share of permits given out for free as total permits. That share given out for free will be greater the stricter the target is. The upshot is, of course, that less money is available for assisting lower income households with higher energy bills and less money is available to invest for government investment in lower carbon technologies.

Secondly, the proposed way of going about it largely illuminates incentives to reduce output of emissions intensive activities, so over time the rest of the economy will have to do more and more, including purchasing extra permits overseas. Thirdly, the scheme encourages continuation or indeed expansion of high emissions activities in Australia that would not be competitive in a world with comprehensive carbon pricing. The aluminium industry is a good example of that. It is largely based around coal fired electricity in Australia. In other places around the world, especially where there are mountains and a lot of rainfall, you have great potential and indeed already existing and expanding production in aluminium smelting, which is essentially zero carbon. Those are, of course, the locations that the future aluminium industry would go to in a world that deals efficiently with the carbon constraint. There are better ways of going about it.

There are very good ways spelt out in the Garnaut review and I am very happy to come back to that if there is interest in it among the committee.

The third issue is the so-called voluntary action by individuals and how it relates to an emissions trading scheme. There has been a lot of press and commentary around that recently. The argument is that if you decided to walk rather than drive or you installed some solar panels it simply means that someone else in Australia, say an industrial polluter, can emit more, paying a lower permit price. I think that argument as it has been put by some sides in the debate recently is rather misleading and in my view unnecessarily feeds into rising public frustration about climate policy. The argument, as I just sketched it, ignores that there is in fact a national emissions target, such as the five per cent, 15 per cent or 25 per cent reduction, and that is in the end what will determine Australia's contribution to the global effort to reduce emissions.

It is not a design fault of the emissions trading scheme or the particular way in which it is spelt out under CPRS. It is simply a consequence of in fact having a national target, quite irrespective of what domestic policy instrument is to be used to meet that target. If we have a national target then that is the national target.

Is this voluntary personal action to reduce energy use and emissions futile with a national target? No, of course it is not—not at all. It is in fact an integral part of achieving the overall outcome at least cost, and personal action will be encouraged by rising energy prices under the emissions trading system. The more we do individually the easier it will be to collectively meet the national target, and that in turn will make it possible to go for more ambitious targets further down the track. That, of course, requires that targets will, in fact, be ratcheted down if and when we find that it is easier to reduce emissions as anticipated, or if the signs and other countries actions indicate that a stronger target for Australia will be needed.

The fourth point is the international dimension. In much of the Australian debate so far Australian climate policy is being discussed as if it were a purely domestic issue. Nothing could be further from the truth. Australia's efforts have to be calibrated to the efforts of other nations so that we can do our bit to encourage others to do more and also so that we can help developing countries in particular do more on mitigation. Secondly, as I said before, there will be market linkages especially through the permit price.

The fifth and final point is in fact the point that Senator Pratt just made about investment and timing. With the economy going into recession it may seem prudent to postpone climate policies, but what that will do is prolong the period of policy uncertainty and therefore further delay investment in new lower carbon technologies. It is true that slower economic growth, in all likelihood, will also reduce emissions growth, and it will very likely make it easier to meet the Kyoto target, but it is essential to put in place the policies that can achieve lower carbon output looking forward to an actual reduction at 2020. In coming back to my earlier point, any reduction compared to past levels at 2020 will in fact be something that requires significant effort.

ACTING CHAIR—A lot of people think that rather than an emissions trading scheme we should have a carbon tax. What would be the arguments either way, in your view, in terms of benefit to Australia?

Dr Jotzo—There are very good arguments in favour of an emissions tax. A lot of the more theoretically inclined part of the economics community is in favour of a carbon tax in particular in the context of a possible international scheme of harmonised carbon taxes. The argument, in a nutshell, goes that the uncertainty about costs imposed on the economy, if we set a quantitative target, is worse than the uncertainty faced on emissions levels if we impose a tax. That is the economic theory going back to the seventies.

The point is that in practical experience, as countries have come to attempt to put in place economic instruments to rein in greenhouse gas emissions, it is the quantitative instruments—the targets and trading approach—that seem to be winning the day. Various European countries have experimented with carbon taxes at various points in the past, principally in the 1990s. It has not amounted to much. It has proved difficult to sustain these and it has proved just about impossible to harmonise the carbon tax rates across countries.

ACTING CHAIR—Do you buy overseas credits with carbon tax? That is not a feature of the carbon tax system, is it?

Dr Jotzo—No. Generally a carbon tax would be conceived as a purely domestic instrument and the assumption behind proposals for internationally harmonised carbon taxes is generally that there would be no transfers between countries or at least no direct transfers within the system. There are divergent views on that particular issue. The school of thought in favour of the tax policies sees that as a virtue precisely because you do not have an extra kind of international financial strain to deal with. The school of thought that sees the targets and trading approach as the right way to go points to the fact that many developing countries would need to get some sort of transfer for them to make it a viable proposition to enter such a scheme. I subscribe to the second school of thought.

ACTING CHAIR—One of the problems that I have with the idea of an emissions trading scheme is that we have an industry in Australia with emissions and they can purchase credits, say, by buying into a forest in Indonesia, and those credits offset their emissions but they do not actually eliminate them. In fact, the benefit in this case is in Indonesia, but the same level of emissions is being produced in Australia. I do not see that as a net gain to Australia. Surely we should be seeking to reduce emissions within this country rather than just offsetting them by buying credits overseas.

Dr Jotzo—If such schemes in fact lead to a reduction in global emissions, then from the point of view of what is the objective of the policy should be just fine, because it does not matter where emissions arise; as we all know, they are perfectly mixed in the atmosphere. All that matters for our national objective of limiting climate change impacts and limiting the risks of extreme climate change impacts in Australia. We should not really care whether it is Australia's, Indonesia's or someone else's emissions that are being reduced. However, picking up on the implied criticism of crediting schemes, such as the clean development mechanism, or the CDM, there is a difficulty in reliably establishing that the claimed offset is in fact a reduction compared with what would have happened otherwise. In fact, the European Union is also now substantially scaling back its support for the clean development mechanism, and as I understand it part of the reasoning there is the uncertainty over the true environmental benefit of these crediting schemes.

Looking to the future, under a targets and trading system the ambition is to have targets or target-like commitments for all countries, including developing countries, and to move beyond the pure crediting schemes. Once you trade against a target you overcome the uncertainty that is inherent in the crediting schemes.

ACTING CHAIR—That is where I have another problem, because you talk about developing countries eventually having a carbon reduction program, but in fact the reality is that most of these developing countries, including Indonesia, China, India and Nigeria, are unlikely to for a very long time. So, here we are setting up an elaborate scheme, which is not going to reduce emissions in Australia at all but will be traded off against theoretical credits in countries around the globe. I do not see that as a net gain to Australia at all. In fact, it seems to me to be a clever bit of mathematical trickery. We have Australian companies paying for credits, which will increase costs in Australia and cost jobs as well because of the increased—

Senator CAMERON—Is that a question or a speech?

ACTING CHAIR—It is coming to a question. It seems to me that there is very little net gain. A carbon tax would be an avenue which would produce immediate benefit to Australia without waiting for countries in other parts of the world that have no inclination to establish ETSs to do so.

Dr Jotzo—Firstly, any carbon price introduced in Australia, whichever way it is, by virtue of a trading system or a tax, will lead to a reduction in emissions in Australia. The point about having the scheme open to the purchase of credits or permits from overseas is that you will get a mix between reducing emissions in Australia and purchasing additional credits, which are at least meant to represent emission reductions elsewhere.

There are a few aspects to the prelude to your question. One is: are these countries likely to introduce carbon reduction policies? I would argue, yes, but it is an incremental issue. The way that the negotiations are going under the Bali roadmap towards a post-2012 agreement is that we are likely to see sectoral agreements with commitments for particular actions, policies and possibly sectors in developing countries. We are not unlikely to see full-scale national commitments by some countries that have not got them under the Kyoto protocol. Of course, from a developing country perspective, it is an absolute necessity that advanced economies take the first step, go ahead in good faith and actually demonstrate that these policies can be implemented without major harm to the economy before they will contemplate implementing these policies themselves. This is something that has been in the dialogue for a very long time and is very broadly accepted as being the way things need to go. That goes hand in hand with the actual need to transfer financial resources to developing countries to pay at least some of the incremental cost, if not all of the incremental cost, of mitigation action in developing countries.

ACTING CHAIR—The key point that I have taken out of what you have said is ‘without harm to the economy’ and I think that will be very hard to achieve.

Senator FURNER—The previous witness made an observation that the time is right. He indicated that it is a very good time to introduce a carbon pollution reduction scheme, particularly in times where interest rates and savings are low. Conversely, others are saying that

the time is not right; the time should be delayed as a result of the global financial crisis. What is your response in respect of those two statements?

Dr Jotzo—My response is that there is no justification for delay in setting the policies in place. There is a subtlety in there in that I would not necessarily claim is an absolute must to have the trading scheme start in 2010. What is needed is policy certainty. Hypothetically speaking, if you had a situation where you had the legislation and the policy settings in place for a scheme that started in 2011 or 2012, that would be much more preferable to a situation where you just said, ‘Look, we’ll set that aside and come back to it in a few years time’, because that would simply prolong the policy uncertainty.

As to whether it is a good time or bad, I do not think that an economic slowdown or a recession is in itself a good reason to postpone those kinds of forward looking policies, in particular because of the point about the investment. If you hold back the scheme you will also be holding back investment in the newer lower carbon technologies and industries. With the prospect of carbon policies coming in some form at some point in the future you will also not get significant investment in the older high carbon industries, either. You will just simply be holding up investment.

Senator FURNER—Thank you.

Senator MILNE—I wanted to follow up on a couple of remarks you made about the high emission industries. In particular, my take is that by actually giving these industries a higher percentage of free permits you are ultimately signing the death warrant for those industries, because unless you make them more efficient now they will go offshore to where they can get renewable energy because that will give them the competitive advantage in the future. Rather than going offshore to access cheap coal fired power or whatever else, they are going to sit there saying, ‘The aluminium industry really only has a future if it is powered by renewables.’ By giving it 90 per cent free permits you are encouraging them to remain inefficient and then ultimately to shut down. Whereas if you auctioned the permits and maybe gave them some sort of depreciation or assistance back from having sold on the permits to make them more efficient, you prolong the life of that industry and maintain the jobs, perversely, rather than if you just give them free rein and let them collapse in the new lower carbon trading environment.

Dr Jotzo—There is a subtle point in there and that is how companies actually go about receiving a certain amount of free permits that is linked to their production but is not linked to the emissions they incur. If firms behave like economic theory says they do, they should still have a full incentive to become more efficient in their operations, because the free permits that they would be getting simply depend on their level of output. To produce the same output with fewer emissions all up they make a bigger profit including the free permits they are allocated.

The point of prolonging existing and in a global sense inefficient industrial structures is an extremely important one, and that is certainly the case under the scheme as it is set up precisely because the scheme is designed not to send any kinds of incentives to curtail production of high emission activities in Australia at all. If you would indulge me to just get back to the way this could be handled?

Senator MILNE—Yes.

Dr Jotzo—It is spelt out in detail in the Garnaut review and in fact in a box in the government's white paper, which then proceeds to go a completely different route. It is really quite simple. I will read it out to you:

For every unit of production eligible firms receive a credit against their permit obligations equivalent to the expected uplift in world product prices that would eventuate if our trading competitors had policies similar to our own.

You make an assessment of what the global price impact would be in a world where everyone prices carbon and then you pay the difference. Why do you pay the difference? Because the world is not, as a whole, as yet pricing in carbon. That would give you very different compensation or assistance rates in different industries depending, first of all, on what the actual policies are for those industries in other countries and, secondly, on what the alternative production opportunities are in other countries. It would give you an efficient forward-looking response to the Australian emissions intensive industries.

Those kinds of industrial activities that would be very competitive in a future carbon constrained world will stay here and they will get a substantial amount of assistance in the transition period, whereas those activities that would not be viable once other countries also implement carbon policies will also feel the pinch a lot earlier and will have incentives to change their practices and become more carbon efficient.

Senator CAMERON—I have questions on three different areas. You may want to take some of these on notice. In relation to the carbon tax versus the scheme that has been adopted here, some of the criticism I have heard of the carbon tax is that there is no specific outcome on emissions reduction through a carbon tax, that you need very high taxes to reduce emissions, that polluters may decide to pay the tax, that tax is about economic outcomes and emissions trading is about emissions outcomes, and it is not well suited to where demand for emissions intensive products are relatively insensitive to price. This is the range of critiques I have heard about the tax. I would like to get your view on that. The second issue is the trading model against the Canadian emissions intensity model; what are the benefits of the model that we have adopted? Lastly, where are the green jobs going to come from and what sectors will produce green jobs?

Dr Jotzo—Would you like me to answer these now?

Senator CAMERON—I am happy to hear some of that.

ACTING CHAIR—I am sure we have time. We will go until around 10.00 pm.

Dr Jotzo—Thank you for those questions. On the critique of the tax, I take them in two blocks. The first would be the issue that you do not get a specific outcome in emissions. That indeed is an issue in particular in a system that works on national emission commitments. That is the world that we live in, in terms of the international negotiations. They really revolve around quantitative targets for each country and very much in the mould of the Kyoto protocol, though evolving from there. Having an emissions tax domestically would be quite a viable instrument for controlling greenhouse gas emissions, but we would not know what the emissions outcome would be at the end of the day and a lot of uncertainty would be transferred from the emitters on to the government, or on to the country as a whole, because the international obligation, in terms of an emissions quantity, would still have to be fulfilled most likely by purchasing permits

overseas. It is often said that a tax reduces uncertainty about costs. It does for domestic emitters, but that uncertainty does not just evaporate in a system where we have a national emissions commitment. It just gets transferred on to the taxpayer.

The other points very much related to the price that you need and whether the emissions tax is in fact a suitable instrument. Anything that creates a comparable price on carbon emissions will have a comparable effect. If we have an emissions trading system with a price of—pick a number out of the air—\$40 a tonne, it will have a very similar effect in terms of abatement actions as a tax of \$40 a tonne. I would not see too much of an issue in that area.

As far as carbon leakage emissions intensive traded industry goes, the presumption with a tax would, of course, be that everyone pays their tax. If you wanted to have a scheme whereby some polluters are fully or partially exempt from the tax you would have to grant very specific tax exemptions, which in many ways is the equivalent of granting free permits. Whether or not politically that would be a different kettle of fish is an interesting question. In theory the equivalence is very strong.

Moving on to the question of emissions intensity targets, I have to say that I am not familiar with the detail of the Canadian proposal. I am familiar with the concept of an emissions intensity target. In the broad, that would be a target that is dependent on the future level of GDP. If the economy grows fast, then it would also imply a higher carbon emissions number. If the economy grows more slowly, the target would be tighter in terms of tonnes of carbon allowed. It equally creates uncertainty about the total volume of emissions allowed under the target, precisely because it is GDP linked. It has some interesting cyclical properties in that the target to some degree actually moves with the underlying carbon emissions growth. In times of boom it also expands the target, so the pressure on the economy in terms of the carbon target is not as large, but in times of economic recession the target also comes down and mimics the fluctuations of the economy. That has positive sides as well as negatives. Intensity targets have often been proposed as a more viable way for developing countries to come on board an international system of carbon targets. In fact, the most notable example here is the Chinese commitment to reduce the energy intensity of the Chinese economy by 20 per cent over a five-year period from 2005 to 2010, and we hear that similar considerations are under way for the following period, 2010 to 2015, in China, which could very well be a model for a carbon target for China. If that came to pass, then doubtlessly it could be a model for many other countries as well.

Senator MILNE—I would like a bit more clarity on that. Isn't the problem here that you can, of course, reduce the carbon intensity of the economy, but as the economy grows massively your overall emissions grow massively, even though you have a less carbon intensive economy? In terms of a global outcome on greenhouse gas emissions you are better off than you would have been if there had been a higher intensity, but you still have not got your restrictive cap at the top. You do not know what your cap is.

Dr Jotzo—It is all in the numbers really. There is a psychological aspect to this as well. A 10 per cent reduction in absolute emissions may equate to something like a 20 per cent or 30 per cent reduction in emissions intensity.

Senator MILNE—How can you work that out?

Dr Jotzo—You would be setting an intensity target on the basis of expected future economic growth, and of course the expectation will be wrong to some degree.

Senator MILNE—If you had gone back 10 years and projected economic growth for the last 10 years in China, you would have been wrong.

Dr Jotzo—Yes. The expectation will always deviate from the observation. There is not necessarily an in-principle problem about an intensity target being less stringent than an absolute target. You can make them both equally stringent, but it is just that the numbers will differ.

Briefly, on green jobs and where they will come from, in my judgement those opportunities are largely in the energy industries. Australia has a great potential for renewable energy sources, just as it has great reserves of fossil fuels. It is really a large issue of transitioning from the latter to the former. There would, of course, be some job opportunities and opportunities for the manufacturing industry, especially as it relates to those new opportunities in renewable energies.

Senator CAMERON—When we have different economic cycles over the years and you come to a new type of process, government has to make up for market failure, in many cases. Do you think these will be market based solutions to these new jobs or will government have to play a role?

Dr Jotzo—With properly designed market instruments you will see those new industries coming to life very quickly, especially if you have a solid and clear long-term policy framework in place that creates a solid expectation of carbon price into the future. I think you will see investment into those new lower carbon opportunities very quickly.

In my judgement, the need for government intervention is really in two areas. One is market failure as it relates to information and technology. Many of the new technologies, especially those that are still at the research and early development stage, have significant externalities in knowledge generation, and the private sector will not fully invest in them because they know they cannot reap the full profits, so there is a strong role for government to go in there and invest.

The second point is in structural adjustment to areas and sectors that will be in decline, such as the coal industry and coal based activities, which in many cases are quite locally concentrated. Judging from historical precedent there will be a need and positive role for government to assist with structural adjustment away from the current pattern of economic activity.

Senator CAMERON—The issue of nuclear power was raised. The evidence that we had from the previous witness was that nuclear power is basically a government operation in the rest of the world because of the cost disadvantages. Do you see that being the same situation in Australia, because there is a vested interest advocacy for nuclear power developing?

Dr Jotzo—From the information I have about nuclear power and the alternatives, it would seem to me that nuclear power would not be a commercially viable proposition in Australia, which is a consequence of two factors. One is scale. We are a very small place and we also do not have any of the engineering and technical basis for nuclear industries. There is apparently a very large fixed cost component in getting all the technological and regulatory structure in place

that you would need for a nuclear industry. That fixed cost is the same for a small country as it is for a large country, which really stacks the cards against Australia adopting nuclear. The other is that there are abundant possibilities of other low carbon energy sources in Australia. They are much more abundant than in many of the countries that have adopted nuclear as a significant energy supply option.

Senator CAMERON—Thank you.

ACTING CHAIR—Senator Pratt.

Senator PRATT—I am interested in your opinion on how well you think the architecture of Australia's scheme fits into the Copenhagen discussions and the architecture of the future international agreements?

Dr Jotzo—Overall the architecture of the proposed scheme fits well into the international context. There are a few rough edges. Perhaps the biggest one is the proposed price cap under the scheme. Until, it is pencilled in for, 2015 there would be a maximum price under the scheme. Government sets that ceiling with a commitment to sell extra permits into the market at that price. Essentially that would preclude Australia from being able to sell permits to other countries, because no other country would want their domestic polluters complying with their domestic obligations by sending money to the Australian Treasury. That is something that clearly stands in the way of linking trading schemes internationally, but it is something that is slated to be phased out, which would facilitate international integration.

Coverage of the scheme is quite comprehensive, which fits with international developments, in particular, if and when the offsetting change in the fuel excise is removed. Agriculture is for the time being excluded, which will facilitate international compatibility because there are many other countries, especially in Europe, where there are doubts over the accuracy of measurement in those land based sectors.

In looking into the future and guessing what might happen, that may be a significant point of departure because such a large share of Australia's emissions and, in fact, opportunities to reduce emissions and sequester carbon are in those land based activities where accounting measurement and estimation are much more difficult than for fossil fuel combustion. That could remain a difficult point to resolve and harmonise internationally, so ways will have to be found around that.

Senator PRATT—You make some comments in your introduction on the size of our targets. You talked about the five per cent to 15 per cent and that they are quite challenging. I am interested in what you think about how our targets compare internationally.

Dr Jotzo—There is a lot of misperception internationally about what our targets mean. I have just returned from the Copenhagen climate conference. Something you get asked as an Australian there all the time is, 'What can we do to help Australia make its targets more stringent?' People know it is five per cent to 15 per cent. People know that the European proposed target range for 2020 is 20 per cent to 30 per cent, which is a big difference already, and then there is this magic range of 25 per cent to 40 per cent that is in the UNFCCC discussions. There is generally very little appreciation of Australia's underlying carbon

emissions growth, which wants land use change and land clearings removed, which very likely will be over the next five to 10 years. That is something like an underlying growth of two per cent a year. We are really fighting against that, and in that light a reduction of, say, 10 per cent or 15 per cent is actually quite a significant one.

It also relates to the question of population growth. Australia is one of the fastest growing countries in terms of population among the developed countries. The European Union, in its current membership, is hardly growing at all in population, as are Russia and Japan. That of course creates a very different dynamic. I think it is a fair effort to be explaining internationally how circumstances vary in terms of the underlying growth momentum. The beginnings of that are being realised. A recent European Commission technical paper looked at different possible indicators for determining or assessing the relative effort implicit in different targets. That also crunches the numbers for Australia. The range of targets seen by the European Commission as equivalent to the European range is actually a very wide range for Australia depending on what indicators you deem to be the right ones. There is a very big discussion internationally to come about that.

In conclusion, if we are looking for the sort of really ambitious international agreement that keeps the risk of climate change to something that might be acceptable—a 450 ppm-type agreement—that will require quite drastic cuts, especially amongst developed countries, and five per cent to 15 per cent is clearly not in the acceptable range for Australia.

Senator MILNE—Why should the rest of the world be the least bit sympathetic to our underlying emissions growth when the Europeans, in particular, have been working very hard for the last decade to reduce their emissions? We have been profligate in the extreme with transport and energy. Why should they turn around now and say, ‘Poor Australia, you haven’t done anything and now you’re obese in energy terms. We should allow you to stay that way’? Why would the rest of the world take that view at all? The second thing with the population growth—the same thing—is that most countries have not only been trying to reduce their emissions but stabilise population and so on. Developing countries are criticised endlessly for increased population and everybody is poking the finger at them saying, ‘You ought to do something about population.’ Meanwhile Australia comes along with special pleadings saying, ‘Oh well, our population’s growing so, therefore, we should be allowed to have more emissions.’ Ditto China, India and all those countries around the world with increased populations. Special pleading on, ‘We are energy guzzlers. Therefore, we should be given a slacker time’ and ‘We want to increase our population. Therefore, we should also be given a special pleading.’ Why would anyone listen to that?

Dr Jotzo—That is a very important point about the ‘profligacy’ in terms of energy use and emissions. That is really where the comparison in per capita growth terms is only a partial one, with that partial comparison not being a valid one.

What was proposed in the Garnaut review and what goes back to a very basic approach to differentiating targets internationally is the so-called contraction and convergence approach where you move towards equal per capita entitlements all over the world over time, and that has two aspects to it. Firstly, there is level aspect, and that is in fact the dominating one, where Australia along with the United States and a few other countries are right at the top of the curve and therefore have to come down the steepest as well. That is in per capita terms.

Under the same system, if you have a fast-growing population, you also have more people over time, so you come down fast and to some degree that is mitigated by there being more people who each have that certain per capita entitlement. The absolute amount does not come down quite as steeply as the per capita amount.

The two really go together. I noted that in a recent submission by the Australian government to the UN climate change negotiations at the end of November, just before the Poznan conference, only the point about population growth was highlighted and not at all the point about levels of per capita emissions. That is really something that just about any other country will see through in no time at all, and in my view it is not a constructive approach in the international negotiations, either. We need to be putting something on the table that adds up in all respects and is broadly acceptable to all countries, and we need to spell out what our role and our commitments in such a system would be, and then other countries will put on the table different models that hopefully also add up to a global solution. That would be the way forward. Population is perhaps an issue for another day.

Senator MILNE—Thank you.

ACTING CHAIR—Thank you for appearing tonight. I will close this hearing now, as we have to go to a division. I thank Hansard and the staff.

Committee adjourned at 9.58 pm