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STANDING COMMITTEE ON ECONOMICS

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

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**SENATE STANDING COMMITTEE ON
ECONOMICS**

Wednesday, 18 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, Mark Bishop, Boswell, Boyce, Brandis, Bob Brown, Carol Brown, Cash, Colbeck, Jacinta Collins, Coonan, Cormann, Crossin, Farrell, Feeney, Fielding, Fierravanti-Wells, Fifield, Fisher, Forshaw, Furner, Hanson-Young, Heffernan, Humphries, Hutchins, Johnston, Kroger, Ludlam, Lundy, Ian 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, Hurley, 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 6.43 pm

CHAIR (Senator Hurley)—I declare open this first hearing of the Senate Economics Committee inquiry into the exposure drafts of the Carbon Pollution Reduction Scheme bills. On 11 March 2009 the Senate referred the exposure drafts of the legislation to the Senate Economics Committee for inquiry. The exposure drafts are 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 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 comment. The Carbon Pollution Reduction Scheme Bill 2009 is the main bill and covers the arrangements for the scheme. The second bill relates to the consequential amendments needed to the National Greenhouse and Energy Reporting Act 2007. The Australian Climate Change Regulatory Authority Bill 2009 will establish the authority that will administer the scheme, and the remaining three bills are technical bills in case the charge for the emissions units issued are at some time considered taxation. The 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 proceedings 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 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 on which it is claimed. If the committee determines to insist on an answer, the witness may request that the answer be given in camera. Such a request may of course also be made at any other time.

I remind members of the committee that the Senate has resolved that departmental officers shall not be asked to give opinions on matters of policy and shall be given reasonable opportunity to refer questions to superior officers or to a minister. This resolution prohibits only asking for opinions on matters of policy and does not preclude questions asking for explanations of policies or factual questions about when and how policies were adopted.

[6.46 pm]

COMLEY, Mr Blair Robert, Deputy Secretary, Department of Climate Change

PARKINSON, Dr Martin Lee, Secretary, Department of Climate Change

SAKELLARIS, Mr Tas, Assistant Secretary, Legislation and Governance Branch, Department of Climate Change

STERLAND, Mr Barry, First Assistant Secretary, Emissions Trading Division, Department of Climate Change

CHAIR—Welcome. Dr Parkinson, would you like to make an opening statement?

Dr Parkinson—I would—thank you for the opportunity to appear before this committee. The draft Carbon Pollution Reduction Scheme Bill, before you today, has had a long gestation period. In the late 1990s the Australian Greenhouse Office, which is now part of my department, published a series of papers setting out how such scheme might work and invited submissions in response.

In 2004 state and territory governments formed the National Emissions Trading Task Force, and in 2006 that task force published a discussion paper on the possible design of a national greenhouse gas emissions trading system. Extensive consultation followed that process and the final report was released in December 2007. In February 2007, premiers and chief ministers announced that if there was no commitment to an emissions trading scheme at the federal level they would implement their own national scheme by 2010.

In December 2006 the former government established its task group on emissions trading, which reported in May 2007. Again, an extensive public consultation process ensued and that task group also recommended that emission trading schemes should be implemented in Australia. Another influential process in the history of CPRS design was the Garnaut review. Professor Garnaut commenced his review in April 2007, completed it in September last year and, in the process, conducted his own extensive consultation process. All of these processes are being mentioned because they have influenced the design of the CPRS. In July last year the new government published its green paper which outlined a detailed blueprint for what became the Carbon Pollution Reduction Scheme.

For the hundreds of stakeholders who had participated in previous policy processes, links to its antecedents were quite clear. This was evident in the systems of caps and gateways, the links to the international carbon market, its mix of auctioning and free allocation of permits, and its stress on providing transitional support to industry in a way that did not interfere with the environmental objectives of the scheme. So, while the CPRS design incorporates progressions, refinements and modifications, it does not reflect a radical departure from the schemes considered in the past.

After an extensive period of public consultation, including over 1,000 submissions from the public, the government released its white paper in December last year. It elaborated on the design elements of the green paper and included a major new announcement—that of the medium-term target range for national emissions by 2020. The draft bills before this committee are the legislative expression of the policy position contained in the white paper.

Before we turn to the content of the bills, it is important to spell out a little why we are here, and indeed why my department exists. Failure to reduce global greenhouse gas emissions will result in changes to our climate that challenge our ability as a society to cope. It carries with it risks to human settlement, agriculture and natural ecosystems. There is now little doubt that human emissions of greenhouse gases are changing the climate. In early 2007 the Intergovernmental Panel on Climate Change published its fourth assessment report with a strong finding that most of the increase in temperatures in the second half of the 20th century is very likely due to increases in anthropogenic greenhouse gas concentrations. Scientific findings since then have only reinforced this conclusion.

Proceedings suspended from 6.50 pm to 7.02 pm

CHAIR—Dr Parkinson, please continue, I am sorry for the interruption.

Dr Parkinson—As I said, the scientific findings since the IPCC report have only reinforced their conclusion. In short, Australia can expect higher temperatures, reduced rainfall in the south and east of the country, rising sea levels and more frequent or intense extremes, including drought, heatwaves, storm surge, extreme rainfall and cyclones. Under a no-mitigation emissions scenario, average temperatures across Australia are expected to rise by around five degrees Celsius by 2100. No-one can say for sure whether recent extreme weather events like the Queensland floods are early signs of climate change. But what the science does tell us is that more of these extreme weather events and other climate change impacts, such as more days per year of extreme temperatures, will occur over time. Any amount of climate change creates risk for Australians to manage, but there are strong reasons to believe that it is in our interest to avoid the larger changes in climate that unmitigated global greenhouse emissions are likely to bring.

The bleak picture of the science has convinced many that something should be done, but since Australia produces such a small share of global emissions, is there any point imposing costs on our economy while others are failing to act? Everyone understands that dealing with climate change will require a global solution. The only way this will occur is if developing countries as well as developed nations are willing to act. It is difficult to persuade poorer developing countries to act if we, a medium-sized affluent country, are not willing to act ourselves. In fact, the Treasury modelling finds that early action is in Australia's interests if we expect emissions constraints to expand gradually across the world over time, and this gradual expansion was a key conclusion of the previous government's task group. The modelling also finds that the costs of action are modest, and the secretary of the Treasury will discuss Treasury modelling next week, I understand, before the committee.

The white paper, echoing similar sentiments out of the National Emissions Trading Task Force and the Task Group on Emissions Trading, also noted that the sooner a framework was put in place the sooner the economy could be in its transition. Starting as soon as possible, a gradual adjustment will allow households and businesses to plan their responses, to manage changes in technology, equipment, skills requirements and the like, and to minimise the risk of stranding long-lived assets. All these things are important to help us reduce the overall cost of mitigation.

Turning to the international dimension, the domestic drivers for action have a clear international context. As Professor Garnaut has put it, the only effective mitigation is global, and strong mitigation with Australia playing its proportional part is in Australia's national interests. Australia is committed to playing its full part in the international efforts to reduce emissions and we expect to see advanced countries, including ourselves, commit to economy-wide emission reduction targets in the current negotiations. We will also need to see major developing economies begin to commit to national policies that substantially restrain their emissions.

There are three reasons from an international perspective why we need our scheme in place against this backdrop. First, committing to a quantitative target without the policy means in place to deliver it would lack credibility. The government considers that Australia should not allow itself to be in the position in which other countries have found themselves where there are no mechanisms in place to meet their targets, risking non-compliance or having to introduce highly expensive policies to meet commitments as they enter the first Kyoto period. Second, as an energy exporter and a country highly vulnerable to adverse impacts from climate change, it is in

our national interest to promote least-cost abatement approaches across the global economy. This means in short an expanding carbon market.

The CPRS will allow Australia to join movements to expand carbon markets that are being seen in many developed countries, including now in the US under the Obama administration. I think it is probably worthwhile reiterating this point. The perception that is sometimes presented in Australia that we are somehow moving before the rest of the world ignores the fact that there are 27 countries in the EU and non-EU that are participating in the European Trading Scheme. The Japanese have a trial trading scheme underway, the New Zealanders have a scheme. While it is subject to review at the moment, it is not under any threat, according to Prime Minister Keating and his climate change ministers. It is not under threat of being abolished. They are committed to emissions trading and they are trying to finetune the scheme.

The Canadians are in the process of developing a scheme and 27 US states and Canadian provinces have committed to cap and trade trading schemes. We have seen most recently in the last couple of weeks President Obama call on congress to deliver him legislation to allow him to implement a cap and trade scheme towards the end of this year or early next year. I think it is seriously misleading to pretend that Australia is somehow ahead of the rest of the developed countries.

Implementing the CPRS allows Australia to join with these others in playing our part and assuming responsibility for reducing damaging greenhouse gas emissions. It enhances our ability to play a strong role in shaping the global response. Having our domestic policies in place allows us to credibly offer solutions to issues of immense national interest and importance to Australia, such as land use and forestry issues, low emissions coal technologies and approaches to addressing competitiveness impacts.

Having concluded that action is necessary, policy designers are then confronted with an array of options, including alternative approaches such as carbon taxes or regulations. I am happy to discuss these later if they come up, but I would like to focus first on what makes good design. I think it really comes down to a small number of key principles. The first design principle is that coverage should be as broad as practicable. This is efficient because it then allows households and businesses to figure out what cost-effective emissions reductions should occur. It does not rely on the government mandating particular reductions from particular sectors. Broad coverage is also likely to be more effective. Setting a cap on most of your national emissions means that you have a guaranteed way of meeting your national objectives. Without a cap, targets are ever only aspirational. As is clear from the draft CPRS legislation, we are attempting to cover about 75 per cent of our national emissions from the start.

The second design principle is the need to create a credible long-term carbon market. Investors need to know that the carbon market is here to stay and this means that we need secure property rights and emissions permits, and stable and predictable rules. The third design principle is the need for balance in the way in which we treat different groups in society. Like any major reform, significantly reducing our emissions is going to affect different parts of the economy in different ways. It is important that we help people and firms to adjust to this.

This issue of balance is critical to achieving long-term sustainability for the scheme. The carbon market we are seeking to create is created by regulation, and ultimately rests on social

consensus. Hence, a sense of fairness is absolutely critical, not only in its own right but because it contributes to the longer term policy goal. The value of permits in the emissions trading scheme can be used to help householders and businesses adjust to a carbon price. However, we need to bear in mind that assistance that we provide to one group is assistance that cannot be provided to another.

In practice, there are and always will be different views on how permits should be allocated and auction revenue spent. In the initial years of the scheme, though, the Australian government has decided that around two-thirds of auction revenue should be used to directly assist households, particularly low income households. Around 25 per cent of permits will be used to assist our emissions intensive, trade exposed industries to deal with international competitiveness and transitional concerns. And around six per cent of permits will be provided to our most emissions intensive coal fired electricity generators, with that support ceasing after five years. This means that around 70 per cent of permits will be auctioned at the commencement of the scheme.

The Australian scheme for emission intensive, trade exposed industries also directly links assistance to the level of production, ensuring that the firms bear a proportion of the carbon cost that they face. And that this proportion will rise over time as the rate of assistance falls by around 1.3 per cent per year. Finally, in the initial years of the scheme, around six per cent of permit revenue will also be used to fund other forms of industry, work and regional assistance through the Climate Change Action Fund.

The fourth principle, and one that I think it is very important to keep in mind, is to maintain sharp incentives to reduce emissions. This has implications for how the government has structured industry and household assistance. If we tie assistance to emissions, then firms will produce emissions. It is far better to tie assistance to output instead, and then leave firms to make a profit if they can reduce their emissions intensity. We must focus on historical emissions data when considering who is emissions intensive enough to be eligible for assistance, otherwise we mute those incentives. If we use current period data, firms will just emit more in order to be eligible. We need to make sure that the firms are not fully insulated from the carbon price. This means no exemptions and assistance levels that mean all firms have to bear at least some part of the national costs of moving to a low carbon future.

Incentives are equally important for households. The government will be increasing payments to low-income households to compensate for increases in energy bills, but it does not believe that making poor people worse off is an acceptable scheme outcome. Increasing government income payments is fundamentally different to dealing with affordability issues by subsidising electricity consumption or invoking price regulations. Households will still see higher prices through their energy bills, but they will have the income and the extra incentives to use their energy more wisely.

The fifth principle is the need for a practical scheme that imposes the least possible administrative burden on business. We have attempted to do this by designing an approach which has maximum coverage—as I said, around 75 per cent of all emissions—while only directly involving around 1,000 companies with mandatory obligations under the scheme. This has been done by using a combination of upstream obligations on fuel and synthetic gas suppliers, and direct obligations on large direct emitters. Carve-outs and exclusions all increase

complexity and need to be avoided to the extent possible. Widespread free allocations involve complex and pervasive application of baselines and new entrant reserves.

All of that adds to complexity and makes any approach really difficult and at times quite impractical. What we have attempted to do is to set a cap and trade approach to emissions where we are clear, at the outset, of what the obligations are on firms. But robust and practical emissions estimation verification enforcement systems are critical to this. The fact that we are able to build the scheme on the back of the mandatory reporting system introduced by the previous government is an important element that allows us to move at the pace that we are moving here.

The sixth and final principle is that emissions trading should be designed to facilitate international trade in units. Linking can assist in cost control for the economy as a whole and for individual firms. It can help bind countries together. It can help create an international community of interest in maintaining a price on carbon—something that would be more easily broken if each country's abatement activities are undertaken in isolation. As I said earlier, we know the developed world needs to help poorer nations to set out on a lower emissions growth pathway, and international emissions trading has an important role to play in that regard. For Australia, the desire to link internationally has underlined the need to ensure our scheme is consistent with existing international standards and laws. This has informed a number of design choices, from the way in which we measure emissions to the types of sources and sinks that we recognise.

I will just touch briefly on some of the economic implications and my colleagues from Treasury will address this in more detail. But the first point that I think is worth drawing out is that the cost on the economy results from the act of reducing carbon emissions, not from the act of having a carbon pollution reduction scheme. It is once you have decided to cap emissions that you have decided to impose a cost on the economy. The emissions trading mechanism has been chosen because it is the least-cost way of meeting that emissions obligation. It was the realisation that alternative, more costly mechanisms would be required over time that caused the previous government to support an emissions trading scheme.

The second point to note is that a well-designed scheme can reduce emissions substantially at relatively modest overall cost to the economy. The transitional measures contained in the scheme design are significant in assisting emissions intensive industries. The Treasury modelling showed that outputs and jobs grow in all major industry sectors while we abate if we have got these arrangements in place.

The third point, because a lot of people start to cite different modelling results, is that existing models do not capture the impact of ongoing uncertainty in climate policy frameworks. Business now knows that climate action is inevitable. Work done for the Task Group on Emissions Trading show that uncertainty over climate action produced real costs to the economy, in particular in the electricity sector. This was one of the reasons why that group agreed that emissions trading should not be dependent on developments internationally. That is, Australia should take on a cap and should move to adopt emissions trading. I raise this because it highlights the fact that we do not face any cost-free options at the moment. We are in a situation of whether we embark on a measured and planned approach to emissions reductions, or we expand an ad hoc and costly approach that has characterised efforts over the last decade.

Turning to the bills themselves, as I said earlier these build on the green and white papers released last year. The exposure draft legislation sets out what is required of participants in the scheme, and the mechanics of the scheme. The exposure draft reflects the policy positions enunciated in the white paper and gives further elaboration of detail. There are two processes in play at the moment. One is the legitimate political debate about what are the appropriate types of policies to be pursued, and the other is the one in which we are engaged here about the effectiveness of the bills in reflecting the white paper decisions. I am happy to come back and go through, in detail, the elements of the bills at a later date. The point I want to make here is that, irrespective of what policy approach we adopt in Australia, the vast majority of the clauses in these bills will be relevant and would be relatively non-controversial.

I will just touch on the targets and then sum up. The CPRS is a tool: it is not a goal in and of itself. The goal is to achieve a particular environmental outcome, and the CPRS is just a flexible tool to deliver whatever emissions reductions are deemed appropriate. The government's decisions on the medium-term target were set out in the white paper and are now reflected in the objects clause of the draft legislation. The policy positions outlined in the white paper were informed by a substantial amount of high-quality economic modelling. Indeed, the Treasury modelling is the most significant and comprehensive exercise ever undertaken in Australia. It considered the effects of emissions reductions on the economy under a number of scenarios involving different levels of Australian emissions reductions and international action. But the Treasury report was concerned only with the costs of actions to reduce emissions. Professor Garnaut's modelling also considered some of the benefits of action to reduce emissions.

The Treasury's key findings were that the costs of emissions reductions are manageable. Indeed, the average cost to GDP growth from the Treasury modelling—which as I said, is only the cost; it is not looking at the net costs and benefits—is around one-tenth of one per cent of GDP per annum. That is about one-fifth of the impact that population ageing is already having on Australia's potential growth rates. Treasury also concluded that a market based approach, such as the CPRS, allows a combination of strong-trend GDP growth and falling emissions which allows Australian industries to maintain or improve their competitiveness with global action, and that early action to reduce our emissions is preferable to later actions.

Consistent with other modelling, the GDP impact is around 0.1 per cent per year to 2050 than would be the case without policy action, and the without policy action case does not take account of the costs of unmitigated climate change on Australia. That 0.1 per cent put into dollar terms would see per capita GDP in 2005 dollars rising from \$50,400 today to between \$54,700 and \$55,200 in 2020, rather than \$55,920 in 2020 in the reference case scenario. So these costs are moderate.

Professor Garnaut's climate change review was based on a detailed assessment of the costs to Australia of participating in global emissions reductions compared to the benefits of global action. The major conclusion of his final report was that the long-term economic costs of inaction are greater than the costs of action. That is, the value of economic activity at the end of the century is higher in Australia with emissions reductions than if we do nothing at all. The white paper saw the government accepts three key findings of the Garnaut report: firstly, that a fair and effective global agreement that delivers deep cuts consistent with stabilising atmospheric CO₂ concentrations at around 450 parts per million or lower would be in Australia's national interests; secondly, that securing global agreement to emissions reductions of this

magnitude appears unlikely in the near future; and, thirdly, that the most prospective way to get to those goals is to embark on global action which reduces the risk of dangerous climate change now and builds confidence that we can marry deep cuts in emissions with continuing strong growth and improved living standards.

That is what has driven the setting of the 2020 emissions target for Australia. That 2020 target, and our 2050 target, signal two things: the broad level of global action that a nation considers desirable and achievable, and what it thinks would be a reasonable contribution to the global effort. The target range for 2020 is to be between five and 15 per cent below 2000 levels. The higher boundary of the range represents the minimum commitment that we would do—even in the absence of an international agreement for the period beyond 2012—and the lower boundary represents the extent to which Australia will accept tighter targets in the context of a comprehensive global agreement under which all major economies commit to substantially restrained emissions to achieve an ambitious stabilisation goal, and advanced economies take on reductions comparable to our own.

The government considers that Australia's trajectory is a credible and constructive contribution and, in particular, it compares well to targets proposed by other countries because it is equivalent to a 34 to 41 per cent cut in the carbon footprint of every Australian over the next decade. Few countries have announced specific quantitative commitments to medium-term targets, but our target represents a comparable effort to those that have, in terms of both our per capita reductions and our reductions relative to our individual Kyoto targets.

As I said, Australia is committed to playing its part in full in forging an international agreement. The Prime Minister made clear that the government would be prepared to reconsider the 2050 target for reducing emissions 60 per cent below 2000 levels if that is what is required for us to play our full and fair part but that it would seek an explicit mandate at the next election for this change.

In conclusion, the draft legislation reflects the results of many years of constructive engagement across government at all levels and the business community, under governments of different political persuasions. It reflects the outcome of a careful and deliberate policy design process that is built on what has gone before. The draft bill provides, we think, a framework for action that can be calibrated with our international commitments over time. It provides a mechanism that means Australia can actually meet whatever targets it sets itself and that it is backed by credible enforcement mechanisms. The legislative framework provides scope for assistance to those who need it. In short, we believe the draft bill will establish the infrastructure to deliver effective, efficient and fair mitigation policy.

CHAIR—Thank you, Dr Parkinson.

Senator XENOPHON—Since Dr Parkinson was largely reading from a document, can he provide the document to the committee? That would be useful.

Dr Parkinson—I would be happy to provide it tomorrow, if that is possible, because I have scribbled on it as I have gone along.

Senator XENOPHON—Sure.

CHAIR—Think you, Dr Parkinson. Perhaps I can start off where you left off by talking about targets. You were saying that very few other countries have set targets. I am interested in how targets fit in with the negotiations for agreement at Copenhagen and how, then, the provisions in this bill will allow our scheme to fit in with other international schemes and the markets and permits that are proposed.

Dr Parkinson—A small number of countries have announced 2020 targets already. The EU has committed itself to 20 to 30 per cent targets. President Obama has indicated a target. The Japanese are expected to announce a target by around the middle of this year. So there are a range of countries that, between now and Copenhagen, will begin to announce what they are aiming for.

The critical issue for us in Copenhagen is: how do we get an international agreement that will see us able to begin to get all developed economies to make contributions—not just to make commitments but to actually back them up? By doing that, how do we then engage developing countries to restrain the growth in their emissions below business as usual? Nobody is expecting the developing economies in Copenhagen to agree to targets of the sort that the developed economies are taking on. We are looking for them to take action to pull their emissions back from their current business as usual trajectories.

The reason for that is that historically it is the developed economies that have developed on the back of the carbon cycle. The United Nations Framework Convention on Climate Change has, at its heart, the concept of common but differentiated responsibilities, which means that everybody has to play their part but those of us who are wealthier and have developed on the back of carbon intensive activities have a role in taking on targets before we ask the developing economies to make comparable efforts.

A clear challenge for us is to find a way in Copenhagen to help the developing economies get on to the low-carbon pathway. How does this scheme help? Firstly, it indicates not just our willingness to take on targets of the sort that we have announced but our commitment to delivering on those targets. Secondly, allowing the import of international permits into Australia helps bind a developing economy into this activity. It gives them financial incentives to begin to participate in emissions abatement.

CHAIR—There has been quite a range of discussion—and I am sure other senators will get into this too—about the five to 15 per cent target and particularly criticisms by Professor Garnaut, who I believe is talking about a 25 per cent cut being a reasonable share of our entitlements. You did mention other countries such as those in the EU having that target, so can you comment on whether we are setting our target too low at this.

Dr Parkinson—No, I do not think we are setting out target too low. I think it is important to recognise that our population growth will be about 45 per cent between 1990 and 2020. So a five to 15 per cent cut in aggregate results in a 34 to 41 per cent reduction on a per capita basis. In contrast, the EU population will grow by about six per cent over the same period. That means that their target range of 20 to 30 per cent in aggregate is broadly comparable to our per capita emissions reduction. To put it another way, if all developed economies took on the same per capita emissions reduction that we are pursuing, we would see the developed economies in total reduce emissions by about 30 per cent in aggregate.

Senator XENOPHON—How do our per capita emissions compare to the average emissions in the EU, for instance?

Dr Parkinson—Our emissions in per capita terms are amongst the highest in the world, so Australia always does have a bigger per capita challenge than other countries. In Professor Garnaut's world where you have a contraction and convergence model where everybody moves towards a similar amount of emissions per head, Australia would have one of the largest tasks in the world to make that adjustment.

Senator MILNE—Why isn't that fair?

CHAIR—Perhaps we will go around the table.

Senator MILNE—No. This is directly related to this particular question. The implication here was that, if we went to a contraction and convergence model, Australia would have one of the highest targets in the world because we are one of the largest emitters. I am asking Dr Parkinson why that would not be fair.

Dr Parkinson—I think it depends on a whole variety of issues. Were we a country that sat next to somebody who had vast hydro preserves and were able to import our electricity at zero emissions but we did everything else the same as other countries would it be fair or unfair that we had been graced by a particular set of natural endowments? It is the way the world is. I am not disputing that Australia needs to take very significant action over time. The government is clearly committed to that. But I think if you are asking, 'Is contraction and convergence the model which countries should adopt?', I think there are a whole variety of issues around population growth, natural resource endowment and where you are starting from that you need to take into account.

Senator EGGLESTON—Dr Parkinson, you know there are various models of emissions trading schemes. I wonder why this particular model has been chosen differentially against, say, a carbon tax. It has been held in the Garnaut report that mitigation through a carbon tax—no exemptions, no shielding of trade exposed industries—had a positive economic effect because the carbon tax was less distorting than taxes that it replaced. Elsewhere I read:

A simpler carbon tax would have lower transaction costs. A carbon tax is preferable to a carbon trading system because it has more efficient, effective, simple, flexible and transparent and, more importantly, a carbon tax has the added benefit of providing revenue, which could be used to cut other taxes. Indeed, a revenue-neutral carbon tax may have little or no economic cost.

By contrast, there seems to be a high economic cost under this proposal. Would you like to comment on that?

Mr Comley—I think the starting point is that there are some differences between carbon taxes and emissions trading schemes. A number of the things that you have read out there I think should not fairly be characterised as differences between carbon taxes and emissions trading schemes. They are the way you choose to implement a particular carbon tax or a particular emissions trading scheme. So, for example, the question of whether there are any exemptions arises both under a carbon tax and under an emissions trading scheme. Under a carbon tax it is a

question of whether you have a legislative exemption. Under an emissions trading scheme it is a question of whether you have free permits provided to industries. Under both instruments you have the same issues. It is a question of how you design that instrument.

In terms of a carbon tax versus emissions trading, the argument is that a carbon tax raises revenue that can reduce other taxes and an emissions trading scheme does not. Again, it is not the actual difference between an emissions trading scheme and a carbon tax—it is actually the way you implement either scheme. So, for example, if I have an emissions trading scheme with 100 per cent optioning, I would get exactly the same amount of revenue for the equivalent carbon price as I would on a carbon tax with no exemptions. The choice of what you do with the revenue is then a policy choice, which is not related to whether you use an emissions trading scheme or a carbon tax.

The fundamental difference between a carbon tax and an emissions trading scheme is not those things; it is a question of whether you want to have certainty over the quantity of emissions that enter the atmosphere or you would like certainty, at least in the short term, over the price that is put on carbon and imposed upon businesses who make emissions. So the fundamental difference is that an emissions trading scheme gives you certainty about how many emissions enter the atmosphere, whereas the carbon tax gives you certainty about price but does not give you certainty about the amount of emissions that enter the atmosphere, because that depends on the relationship between the carbon price and the responsiveness of the economy. That is really the fundamental difference between the carbon tax and the emissions trading scheme. Those other matters are really matters of comparing different designs of a particular carbon tax and a particular emissions trading scheme.

Senator EGGLESTON—Would you say a carbon tax in the end would be less likely to cause increased costs to the community?

Mr Comley—No, I would not, for a couple of reasons. The first is, as Dr Parkinson said in his opening statement, if you are focusing only on the costs of mitigation—not taking account of the benefits associated with reducing the risk of dangerous climate change—

Senator EGGLESTON—I think he is dealing with the economic costs to the community.

Mr Comley—I think the costs of inaction are also economic costs. They may be more difficult to quantify. If we look at just the mitigation costs—which I think is what your question is directed at—as Dr Parkinson said in the opening statement, the fundamental question, the first-order question, is how ambitious your emissions reduction task is. The instrument with which you choose to achieve that task is the next-order question. For a particular level of emissions reduction, does a carbon tax or an emissions trading scheme have a lower cost? Both are relatively efficient economic instruments that have relatively low costs for a particular emissions reduction target.

The important difference between the two though is the level of business certainty that can be provided by an emissions trading scheme versus a carbon tax. That is important because business certainty promotes the sort of investment environment that promotes growth over the longer term. It is often claimed that carbon taxes provide greater certainty because they have a fixed price. The problem with that argument is that, if ultimately we are going to be concerned

about ensuring a particular environmental outcome, the carbon tax needs to be changed to meet the environmental outcome. In that case, the carbon tax must be changed. This exposes businesses to significant risk because that means that the parliamentary process must discretionarily change the carbon tax rate from time to time. This brings potential dislocations into investment planning which can be quite difficult to forecast for businesses. In the case of the emissions trading scheme, you would expect that financial markets would start providing risk management tools that allow businesses to hedge, that is to take financial products to cover themselves for that price volatility in the emissions trading scheme. That in fact creates greater business certainty over the medium term when you are comparing an emissions trading scheme with a carbon tax.

Senator EGGLESTON—I heard an item on the radio this morning suggesting that by the purchase of credits we in fact would be doing very little to reduce emissions in Australia and that the whole scheme is therefore seriously flawed because Australian industry could purchase forests in Indonesia or somewhere like that and not really do anything to mitigate the carbon emissions. What do you say to that?

Mr Comley—In a sense, your initial question was about reducing the cost and ensuring there is low cost. In fact, one thing I neglected to mention is that a benefit that is normally attributed to emissions trading schemes is the capacity to link internationally to trade. That recognises that this is a global problem, so it does not really matter whether a tonne of CO₂ enters the atmosphere in Melbourne, Moscow or Indonesia. The ability to access international credits is a mechanism that ensures you have a least-cost implementation of the scheme in achieving a particular emissions reduction target in terms of what is going into the atmosphere across the globe.

Senator EGGLESTON—Isn't that somewhat fraudulent though, because you are not actually reducing emissions in Australia through that process, as I understood it from what was said on radio this morning?

Mr Comley—There are two points to make. In all the international architecture that is being created, and if you look at Professor Garnaut's report, the question is about emission rights for a particular country—what you are responsible for in the international architecture but not necessarily what happens within your domestic country. But it is also not true to say that you will not have emissions reductions domestically, because the mere act of imposing a cost of carbon in the economy means that businesses will reduce their emissions below the business-as-usual level. Treasury colleagues can comment in more detail about the breakdown of that, but the Treasury modelling indicates that over half of emissions reductions occur domestically within Australia and not all of it is imported from overseas.

Dr Parkinson—Just to add to that, the higher the international permit price the more abatement there is in Australia. So the very act of being able to link is a way of equilibrating the costs across countries. It is very easy to prohibit any imports of permits, but you have to understand that a consequence of that is that it drives up the cost of abatement in Australia quite significantly.

Senator EGGLESTON—You mentioned Treasury modelling; would you be able to provide us with some details of that modelling?

CHAIR—I think Treasury is coming before us.

Mr Sterland—Every one of those models that the secretary raised at the beginning of his presentation on the history of this debate in Australia have had a very significant role for linking. That aspect of scheme design has been a well-established one with successive stakeholder consultations. So the suggestion that has been around in the press this week that this is somehow a new element that has come from looking at the exposure draft legislation is not the case. It was certainly fully present in the white paper. The green paper had a substantial role for linking, the previous government's task group report had a very significant role for linking and the state exercise did as well.

Senator EGGLESTON—The minister must have known about, because it was referred to in a radio program today.

Dr Parkinson—He did, however, say that it was fortunate. The Treasury modelling has a very clear discussion of the split between abatement that accrues to Australia that is done within our borders as against that which is done through the importation of permits.

Senator EGGLESTON—I think most people see the purpose of the scheme as reducing emissions in Australia, not overseas.

CHAIR—I am sorry, I will have to end discussion here as we are short of time.

Senator CAMERON—Dr Parkinson, I worked in the power industry in the Hunter Valley and I serviced the coal industry as a union official for about 14 years, so I am quite sympathetic about jobs in that area. I have had representatives from the coal industry over the last couple of weeks, claim that they have been unfairly treated. This does not sit with your principle 3, that people should be treated fairly. I must say that they have been a lot nicer to me this time than they were when I was a union official, but I just want to clarify whether they are being unfairly treated. How are they being treated from your perspective?

Dr Parkinson—We do not believe they are being unfairly treated.

Senator Joyce interjecting—

CHAIR—Dr Parkinson, ignore interjections.

Dr Parkinson—It was the wink that got me, actually! The Climate Change Action Fund allocates \$750 million to the coal industry to assist, amongst other things, in dealing with fugitive emissions in gassy mines. If you look at the emissions intensity of coal mines, you have a small number of very gassy mines that are highly emissions intensive, but the vast majority of the coal industry is very low emissions intensive. Were you, for example—as the coal industry sometimes seek—to treat them as an emissions intensive trade exposed industry, you would provide a massive windfall gain to very large parts of the coal industry and you would not actually deal sufficiently with the problems that the gassy mines face. The government decided that the most sensible way to deal with this was to deal with the problem itself, which was to provide money to assist the coal sector to actually address the issue of high emissions intensity mines.

Senator CAMERON—The other issue they have put to me is that they should be treated differently, and that they should be treated as EITE. If the coal industry were treated as an EITE—an emission-intensive trade-exposed—

CHAIR—How do you pronounce it?

Senator CAMERON—I do not know!

Dr Parkinson—‘EITE’ as in rhymes with ‘Weeties’.

Senator CAMERON—‘EITE’ like ‘Weeties’—that’s good, yes. So how much would it cost to treat the coal industry as an EITE, and where would the money come from?

Mr Comley—Before you get to the point of what it costs for an EITE, that would presume you applied exactly the same rules as the EITE regime at the moment. Dr Parkinson was trying to comment that the nature of the industry would make it look demonstrably unfair to other industries for it to be treated in that way. To expand on what Dr Parkinson said, the threshold for EITE assistance is either 1,000 tonnes per million dollars of revenue, or 3,000 tonnes per million dollars of value add—that is the threshold to get over. We use an industry average benchmark to determine whether you get over that threshold.

In most industries, the variation between the most emissions intensive and the least emissions intensive is quite tight—it would fall between five and 10 per cent. In fact, in many industries there is effectively one firm that is the EITE. In the case of coal, the variation is a factor of 1,000. And it turns out that, when you have that variation, if you applied a threshold of around 1,000 tonnes per million dollars of revenue, roughly 90 per cent of mines would actually fall below the 1,000 tonnes per million dollars of revenue threshold, and many of them a long way below that threshold. Now what that means is: if you applied the industry average approach, you would be overcompensating and actually providing more permits than those mines actually had liability, and that would apply for around 90 per cent of the mines in the industry.

So when we look at the question of whether EITE assistance is appropriate, when it was looking at coal, it was thought that a scheme that was designed for industries that are reasonably tightly classed in emissions really did not make sense when you looked at the implications for an industry with that spectrum. And, as Dr Parkinson said, part of the problem was that, if you use an industry average, you will massively overcompensate some, but those that have a real problem of being a gassy mine—and some of those might in fact have equivalent emissions intensities of 4,000 or 5,000 tonnes per million dollars of revenue—would get a very small amount of assistance because the average of the whole is quite a lot lower. So, when we looked at that, we thought it was not really sensible to think about the standard EITE assistance being applied, because you would have these large gains to those that would get more than their permit liability and it would not do enough to solve the problem for others.

So the intention is to take \$500 million from the coal fund and skew the distribution to the most gassy mines—so, although the final design parameters have not been determined, the intention would be that it would be essentially those over 1,000 or something similar—allocate it to the most gassy mines and then provide the other \$250 million which is designed to assist technologies that directly allow you to reduce emissions.

The other difference with EITES with coal mines is that most industries can make gradual improvements to their emissions intensity over time. It is the case with particularly gassy mines that there are opportunities to either flare and significantly reduce emissions, or to introduce technologies such as voxidizers that could make quite significant step changes in the emissions intensity. So, for those reasons, it was just thought that EITE assistance was designed with different industries in mind, and, once you have this variation of about 1,000 times the intensity, it just did not make sense to apply EITE assistance.

Senator BUSHBY—I thank the officers for coming along tonight to assist us with the inquiry. One of you—I think it may have been Mr Sterland—mentioned that when you put a cap on that is when it introduces the cost to the economy. Is that correct?

Dr Parkinson—I said that.

Senator BUSHBY—Sorry—it was you, Dr Parkinson. Isn't that effectively the whole idea of the scheme: to place costs on those industries that emit carbon, to effectively distort the economy away from industry that emits CO₂ equivalents to an economy that emits less. Is that a fair statement?

Dr Parkinson—I think the way I would put it is that we have a situation at the moment where firms emit carbon and are not responsible for the long-term costs that that imposes on the economy. So what we are trying to do is to move to a situation where firms recognise the cost of emitting carbon and take that into account in their production and technology decisions. But that is not a consequence of the CPRS. That is a consequence of saying, 'Australia is going to cap its carbon emissions at X.'

Senator BUSHBY—That is right. I understand that.

Dr Parkinson—And then the CPRS gives you the least cost way of getting to that cap.

Senator BUSHBY—I understand that. And then you have the reduction of that over time, which effectively achieves the outcome that we are trying to create, which is a lower overall level of emissions. But, by doing so, it is imposing costs—a cost of carbon—which they need to include in their overall business models, on those industries that actually emit carbon.

Dr Parkinson—Absolutely.

Senator BUSHBY—And it is deliberately done to try and get that shift. It is a bit of a policy decision of the government to try to shift towards a lower—

Dr Parkinson—It is exactly analogous, in terms of changing the price signals, to liberalising the economy—tariff liberalisation and the like. It is all about trying to move the economy, over time, to a situation where it is able to survive and prosper against a different set of global prices.

Senator BUSHBY—That is right. I understand you introduce tariffs and those types of things to achieve policy outcomes which are not directly related to what you are doing but which over time will actually achieve those outcomes, and it is a similar situation here. I am interested in going to the next level. The cost of carbon is added to the cost of doing business, if you are a

carbon or a CO₂ equivalent emitter. The intention under the CPRS, as proposed in the draft legislation, is that if the cap is introduced and progressively over time it comes down, the cost of carbon will increase and will provide an incentive to all sorts of businesses that are emitting to move to a lower output of CO₂ equivalent gases.

Dr Parkinson—Absolutely, to try and bring forward new technologies and encourage firms to adopt existing technologies that allow them to have a lower carbon footprint.

Senator BUSHBY—How confident is the department that as the cap reduces all current industries will be able to either afford to buy the price of carbon units as they increase in price, as they presumably will as supply falls, or substitute an alternative technology that enables them to continue to operate without having to pay a cost that they cannot afford?

Dr Parkinson—The heart of a cap and trade scheme is that you impose the cap, which does exactly what you have described, but then the trading mechanism means that firms are able to trade the permits amongst themselves so that those who are able to abate at least cost do so and onsell the permits to those for whom it is more costly.

Senator BUSHBY—But the firms for whom it is more costly still have to be able to afford to buy those units and still operate in business. Is it accepted that there will be some business or industries that will not be able to afford the cost of those units and, as part of the transition to the lower carbon economy, will actually end up going out of business?

Dr Parkinson—That is why we introduced the so-called EITE policy—

Senator BUSHBY—That only applies to emissions intensive trade exposed industries and there are industries within the economy that will not meet those requirements.

Dr Parkinson—That is true, but if they are not emissions intensive then the costs they will face will be very low. If they are not trade exposed, that means that all participants in that industry in Australia will face similar costs and they can raise prices and pass it on to the community.

Senator BUSHBY—I understand the point you are making there. Effectively, you are saying that if they are not trade exposed, even though they may be emissions intensive, because all participants in the industry within Australia will face the same thing, none of them will be at any disadvantage as a result.

Dr Parkinson—Not necessarily—

Senator BUSHBY—I do not necessarily agree, but I was just trying to work out what you said.

Dr Parkinson—There is one industry where some players are very emissions intensive but none of them are trade exposed and there are differential impacts—that is, the electricity sector. But outside that, there are not a lot of highly emissions intensive industries that are not trade exposed and they are generally electricity and domestic gas. Domestic gas producers can pass the cost through to the retailers and then to the end consumer. In the case of electricity, there are

differential impacts and that is the rationale for the Electricity Sector Adjustment Scheme. In the case of the EITES, the whole design of the emissions intensive trade exposed assistance package was to deal with exactly the problem that you are raising—that Australian firms will face competitiveness issues.

Senator BUSHBY—I am not looking at that. I see a huge problem with carbon leakage, but we do not have time to get into that today. I presume a small-business farmer would not be considered emissions intensive, as it stands, before 2015—is that correct?

Dr Parkinson—They would be emissions intensive but would they face no obligation for the emissions that arise on their farm.

Senator BUSHBY—That is for the actual livestock?

Dr Parkinson—Yes.

Senator BUSHBY—But a small business farmer would still have increased costs for fertilisers and a whole range of inputs that they would have to face during the day. Farmers run on fairly small margins. Senator Joyce could tell you that they run on fairly tight margins. Coming back to what you were saying before, all farmers will have increased costs and therefore, theoretically, they should not be affected because they are all facing the same challenges.

Mr Comley—Senator, I think there is something worth adding. Dr Parkinson is talking about relative price impacts. I think that is quite important because a lot of people focus on the absolute cost impact but in fact the relative cost impact is quite important. I will give you two examples of why that is the case. The modelling that Treasury did indicated that the average CPI increase of the package was 1.1 per cent. At one level, anyone whose product faces a cost impact of less than 1.1 per cent has just become relatively more competitive compared with other products that are sold in society. That is partly backed by the fact there is a large household compensation package, so consumers have more purchasing power for the 1.1 per cent. Dr Parkinson talked about the fact that, outside the trade exposed areas, electricity and perhaps gas, most people are not very emissions intensive at all. If you calculated, at the carbon prices being envisaged, the amount of the expected cost increase, most of those are below the one per cent level, so in a sense they have a cost impact that is lower than the 1.1 per cent level.

The second point that is worth making is that you could have someone who might be trade exposed—and that farmer might be trade exposed in terms of their output—but who is not emissions intensive enough to be covered. One of the other things that comes through the Treasury modelling, which in a sense is the quantitative exercise that is trying to answer your question about what happens to the various industries, is an expected change in the exchange rate or an expected exchange rate depreciation, and that often offsets more than the cost impact if you are not particularly emissions intensive because that exchange rate effect is primarily driven by the particularly emissions intensive trade exposed areas. That is a long way of saying that what the Treasury modelling tries to do is get exactly at your question about what happens to each industry. That modelling indicates that there are virtually no industries that will contract in absolute terms as a result of the imposition of the CPRS.

Senator BUSHBY—Will we have an opportunity to talk about that?

Mr Comley—Yes.

Senator BUSHBY—I would like to explore that further but there are other issues that I need to raise quickly. I understand that, when a large company is reporting its emissions, it needs to have information on all emissions associated with it, including those of subcontractors they might have contracts with and other smaller entities that are related. Is that true? Is that the case?

Dr Parkinson—This is under the National Greenhouse and Energy Reporting System that is already in operation.

Senator BUSHBY—Right.

Dr Parkinson—But for the CPRS the obligation relates to the firm's direct emissions.

Senator BUSHBY—The firm's direct emissions? So they do not need to give information about subcontractors under this legislation?

Dr Parkinson—There is a capacity for firms to shift the liability through the use of an obligation transfer number. Mr Comley knows more about that particular design element, but it essentially allows you to move the liability from one part to another. So your contractors could be—

Senator BUSHBY—At whose discretion? Does the larger emitter decide that or the subcontractor?

Dr Parkinson—It has to be a mutual agreement.

Mr Comley—Yes, it has to be a mutual agreement. The default is to start with who has operational control of the facility. So whether the contractor or the facility is liable is a question of fact as to who has operational control of that activity. If it was decided that not the contractor but the facility itself had operational control then the default within the legislation is that the liability would rest with that firm.

Senator BUSHBY—To report for the subcontractors as well?

Mr Comley—That is right. But the legislation allows the flexibility, where it is seen to be more sensible for the contractor to report that, to shift the liability to the contractor.

Senator BUSHBY—But the contractor would have to report his or his and the major emitter's as well?

Mr Comley—No, you can decide. There are a number of conditions in which the regulator has to be convinced that this is not going to lead to avoidance, but, provided that they are not met, the two of them can agree to shift the liability for some of those emissions. That is a question of what makes more commercial sense in that situation, and what the two parties are happy to do.

Senator BUSHBY—But the default position is that the major company, in that circumstance, would report for themselves and for subcontractors.

Mr Comley—The default position is the one with operational control. The reason I am not answering that definitively is that there are different circumstances.

Senator BUSHBY—In those circumstances that you are describing, that would be the default position?

Mr Comley—That is right.

Senator BUSHBY—And so the primary company, for want of a better term, would have to chase the subcontractors and gather information from them to be able to report in accordance with the legislation?

Mr Comley—That is correct, but the point is that if they are considered to have operational control, or if they have operational control, they should have access to the emissions data that is available. If they do not have operational control, they may not have the emissions data. But then the contractor would have operational control and they would be the one required—

Senator BUSHBY—So there is an obligation on them, as the entity that is considered as having operational control, to actually have access to that as part of their relationship with the subcontractor?

Mr Comley—That is right. But one thing that is perhaps worth pointing is the nature of the emissions that will be covered. A number of emissions that they might use, like electricity, might be relevant for the NGER Act but are unlikely to be relevant for the CPRS. It is really those emissions that will be—

Senator BUSHBY—With this legislation, who will guide these businesses as to what their obligations are and how they tell which of their emissions is the one that—

Mr Comley—It will be the new regulator, the Australian Climate Change Regulatory Authority.

Senator BUSHBY—In each of these scenarios, you have got subcontractors working for a primary company. They will need to liaise to find out what they should be doing and what they should not be doing, and what they need to put in their contracts when they subcontract—in terms of obligations to disclose—and so on.

Mr Comley—In fact they are currently starting that process under the National Greenhouse and Energy Reporting System. The act has been in force since 1 July last year, and exactly those sorts of discussions are currently happening with the Greenhouse and Energy Data Officer—about who is seen to have operational control of a particular facility.

Senator BUSHBY—Which is obviously why the Department of Finance and Deregulation is not doing it.

Senator PRATT—I have got a series of questions relating to households. One of the issues with the cap-and-trade scheme, as it has been put to me, is how the scheme is going to take account of the actions of households who want to reduce their carbon footprint and do the right thing. How will those kinds of reductions be accounted for in the scheme?

Dr Parkinson—The scheme provides substantial provision for individuals to contribute to reductions in carbon pollution. Essentially, what we are doing here is that we are taking, by 2020, between 130 and 195 million tonnes of emissions out of the atmosphere each year. You have to be careful. There is a bit of a presumption around that we have somehow already hit the cap, so that further household action can tighten the cap. In fact, all of us are going to have to undertake efforts to allow Australia to deliver those emission abatements. The government is conscious of the need to recognise voluntary action by households. There are two ways in which that can be done. Firstly, the scheme allows anyone to purchase permits and essentially submit them to the regulator to have them torn up. If they do that, the government will take out of operation an assigned unit, under Kyoto.

The second, though, is that the minister and future ministers have in their capacity of setting future caps the ability to take account of likely voluntary action when they set the caps. So there is both the actual ability of an individual to tear up the permit and the capacity of the minister to take voluntary action into account. What I was trying to say at the outset was that this is an interesting debate at the moment because it is proceeding almost as if we had already done all of the 195 million tonnes and are now talking about what else we can do on top of it, whereas in fact all of us—all industries and all households—are going to have to contribute to lowering our emissions to reach the target.

Senator PRATT—Thank you. I think that goes a long way to addressing that question. I am interested in knowing what kinds of increases in prices for energy households are going to face. I am not sure if you went through it in your opening remarks; unfortunately I was in the chamber. I would like some more details about the CPRS households package. In states like WA we already have significant energy increases on the cards, and I want to know what is going to be put in place to help households deal with these other extra energy costs.

Dr Parkinson—There is a detailed discussion in the white paper around the household impact and the household package. As Mr Comley said, there are a range of elements to it. The aggregate CPI impact is around 1.1 per cent. On the assumption that the permit price is \$25, we get a CPI impact of 1.1 per cent in 2010-11. Carbon price is estimated to push up electricity prices by around 18 per cent and gas prices by around 12 per cent, or an average increase in spending for households of \$4 a week for electricity and \$2 a week for gas and other household fuels.

Before we leave that, there are a number of assistance measures that the government has announced. The first is an offset to the fuel excise for the first three years. Then pensioners, seniors, carers and people with disability receive additional support above indexation to fully meet the expected overall increase in costs. Low-income households also get support that fully meets the expected overall increase. Middle-income households receive additional support to provide them with assistance to meet at least half of the costs. Low- and middle-income working households also receive tax cuts that assist. As I said, motorists receive a cent-for-cent reduction in fuel excise.

Senator PRATT—To what extent is it expected that householders, on the basis that people know that they need to do something about climate change, will work to reduce their energy consumption and also mitigate those price increases?

Dr Parkinson—That is a very good question. There will be a range of household measures under the CCAF, the Climate Change Action Fund, designed to encourage people to change their behaviours, because it is far better for them to reduce their consumption and lower costs than to do nothing, face the higher costs and receive an income transfer. If you look also at the recent Nation Building and Jobs Plan package, there is almost \$4 billion set aside there to help insulate residential accommodation, and that is a significant part of that. So there will be a range of measures around improving energy efficiency and the like.

Senator PRATT—My last question relates to, I suppose, this model versus other models—for example, the Canadian emissions intensity model—in terms of how we are best able to serve households in helping them mitigate costs, manage emissions and manage extra cost increases. How does your choice of model affect your capacity to deliver those kinds of policies to householders?

Dr Parkinson—You can deliver these complementary policies to improve energy efficiency and the like, in a sense, through any scheme that raises money or directly through the budget. The issue that is important to keep in mind about the Canadian approach is that, as Mr Comley said earlier, you are trying to reach a quantitative reduction target. The Canadian scheme is an emission intensity target, so you can never be sure—even though firms might be improving their emissions intensity—what quantity adjustment is going to occur in your economy.

Senator PRATT—Surely, if you are going to tax carbon as an incentive to get people to reduce emissions, you could not get householders to reduce emissions by taxing them and then giving them back a subsidy? That just would not make sense.

Dr Parkinson—That is exactly right, and that is why we do not actually subsidise consumption of electricity for households. We change the relative prices of electricity and gas versus other things, and then we give back to low- and middle-income households a cash amount that—at least for low-income households—leaves them where they were previously. But they have different prices, so they can switch between different products. Their income is no worse off, despite the price rise.

Senator JOYCE—I am going to start right from the word go. Your model is based on the belief that the level of carbon in the world is increasing—anthropogenic and other.

Dr Parkinson—The model can deal with anything—

Senator JOYCE—But do you believe that carbon levels in the world are increasing?

Dr Parkinson—All of the scientific evidence is that CO₂ levels, or greenhouse gas levels in CO₂ equivalent, are rising—that fact is indisputable. Anthropogenic CO₂ emissions are rising, and it is anthropogenic CO₂ that the weight of the scientific evidence tells us is causing climate change.

Senator JOYCE—Okay. You believe that climate change means the world is warming?

Dr Parkinson—Yes, and does that mean that the world will warm in each and every year? No, it does not—it is a trend phenomenon. You cannot look at one year's differences in temperature and conclude anything one way or the other. But when you look at longer time frames, all the evidence is that the temperature is rising. You can see that in Australia and globally.

Senator JOYCE—Carbon levels are rising and the world is getting warmer—that is what you believe. I premise that you are bringing about a scheme that the government will sell a permit to reduce carbon levels and make the world cooler?

Dr Parkinson—We are developing a scheme in the same way that the previous government wanted to develop an emissions trading scheme because it regarded dangerous climate change as at risk of occurring, and that Australia needed to play its part to avoid—

Senator JOYCE—Hang on, let me ask the question—it is very important. That is the premise on which we are developing this scheme to sell permits—that we are going to reduce carbon and make the world cooler. That is it, isn't it?

Dr Parkinson—There are essentially only 15 major emitters—so with the factor of 200-odd countries, the vast majority of them are not relevant to this—and they are responsible for around 80 per cent of all greenhouse gas emissions.

Senator JOYCE—It is a very simple question: you are selling permits to reduce carbon to make the world cooler. Is that the motivation behind it?

Dr Parkinson—To stop it getting hotter.

Mr Comley—I think the link that is important there is you are introducing a scheme which will reduce carbon pollution in Australia to contribute to a global solution that will lead to lower growth in atmospheric concentrations.

Senator JOYCE—I will get into the contribution to a global solution later. So people are buying it with a warrant, given that this is about reducing carbon and to keep the temperature the same or make the world cooler—

Dr Parkinson—I am sorry, Senator. It is actually to avoid the global temperatures rising.

Senator JOYCE—It is to avoid the global temperature rising? Fair enough.

Dr Parkinson—We already have evidence that the temperature in Australia has increased and we already have evidence the global temperature has increased.

Senator JOYCE—That is marvellous.

Dr Parkinson—Well, Senator, it is not marvellous.

Senator JOYCE—Hold on. I am asking the questions. You are doing the answering, okay? It is a warrant that is given where you are selling permits to stop the world getting warmer by the reduction of carbon. If, by some unforeseen means—and I do not know what that is; everybody gives warrants and they sell things—carbon levels actually start to reduce, or the world starts getting cooler, are you going to give people their money back?

Dr Parkinson—In which year?

Senator JOYCE—In the year it is conclusively proven. I just want to know: do people have the capacity to back to you and say, ‘Well, you got that one wrong. I want my money back’?

Dr Parkinson—It strikes me that that is a policy question.

Senator JOYCE—Is that not in the model?

Dr Parkinson—Governments can do anything they want.

Senator JOYCE—Is it in the model at the current time?

Dr Parkinson—There is no right of refund written into the model.

Senator JOYCE—So there is no contingency for that in any way, shape or form?

Dr Parkinson—In the way in which the scheme operates, the contingency is that you are setting a target off into the future and you have a set of gateways which you are tracking towards. Governments have the capacity to move up and down within those gateways, in light of a whole range of things.

Senator JOYCE—I am just saying that if your product does not work, are you going to refund to people?

Senator PRATT—It is going to take more than 100 years to reverse global warming. Wait for you refund until then.

Dr Parkinson—This is a stock problem. It is the stock of CO₂ in the atmosphere, not the flow. You could turn off all of the emissions into the atmosphere tonight and you would still face a problem, over the next 20-30 years, of rising temperatures. I am sorry, but I do not understand the question.

Senator JOYCE—It is quite simple. In any product that you sell, if the methodology is later proved erroneous—and the history of human civilisation proves things that people formerly thought were wrong—do you have the capacity in your model to say, ‘We got it wrong. Here’s your money back’.

CHAIR—Senator Joyce, I do take Dr Parkinson’s point—this is straying into policy area.

Senator JOYCE—I just wanted to know if it is in the model. He said it is not.

CHAIR—Exactly. We are short of time.

Senator PRATT—There is no ‘climate sceptics proved right’ clause.

CHAIR—Do you have any other questions on—

Senator JOYCE—Yes, I have a lot questions. How many times, do you believe, will these derivative products that you sell be churned—that is, bought and bought, bought and sold—within a year?

Dr Parkinson—There is a fundamental premise that is just not correct here. We will not be buying or selling any derivative products.

Senator JOYCE—I know you won’t, but the market will.

Dr Parkinson—You asked me whether the products that I was selling—

Senator JOYCE—Oh, don’t be tricky.

CHAIR—Senator Joyce, I think you might be asking a Treasury modelling question.

Dr Parkinson—No, it is not a Treasury modelling question.

Senator JOYCE—He is trying to be a smartie pants.

Dr Parkinson—Senator, would you like to repeat that?

Senator JOYCE—I said you were trying to be a smartie pants. Do want me to spell it for you, hand it to you on a piece of paper?

Senator CAMERON—Point of order! It is absolutely unacceptable for the senator to treat public servants in that way.

Senator JOYCE—It is not, Senator Cameron. It is actually Mr Parkinson—

CHAIR—Order!

Senator CAMERON—It is unacceptable. You are being rude, aggressive and stupid.

CHAIR—We have a lot of people who want to ask questions. Senator Furner can ask a question, and I will come back to you, Senator Joyce.

Senator JOYCE—Is this a case of shutting down the questions, Madam Chair?

CHAIR—No. Senator Joyce, I said I would come back to you.

Senator JOYCE—Madam Chair, that is rubbish.

Senator FURNER—Dr Parkinson, can we go to the subject of business relocation and the concerns that have been expressed over that?

Dr Parkinson—Sorry Senator, I cannot hear the question.

Senator JOYCE—Why would you do that, Madam Chair? Why are you concerned about that line of questioning?

CHAIR—I am doing it because, Senator Joyce, I took the point of order and I do object to people calling names across the room in a session—

Senator JOYCE—The witness was deliberately evasive to a question.

CHAIR—and engaging in debate of a personal nature, while Senator Xenophon has been sitting there very quietly waiting to ask his question, as has Senator Furner. I want everyone to calm down. Senator Furner has one question. I said I would come back to you after that question.

Senator FURNER—Dr Parkinson, in relation to the concerns expressed about business relocation leading to carbon leakage, there have certainly been a number of indicators from people in particular businesses—for example, Mr Tim McAlpine from ALCOA—that you would not just pack up a \$20 billion investment and shift it offshore. I think that was further complemented by a past opposition leader, John Hewson, who indicated that you do not just put an aluminium smelter in your backpack and shift it over to Indonesia. From your consultation with business, and also looking at the examples globally, what is your response to that particular subject?

Dr Parkinson—I think it is important, when we think about the EITE policy, to recognise that we are trying to do two things. We are trying to address the risk of carbon leakage. We are also trying to assist Australian firms undertake the transition to a low-carbon future. If you were only worried about carbon leakage—that is, the closure of investments in Australia—then you would not be providing the level of support that is proposed in the white paper. That is—and I will be very clear about this—there is more support being proposed than is necessary to deal solely with the issue of carbon leakage. The reason for that is that the government is attempting to smooth the transition for individual firms, rather than just have them take a hit on their profit.

What does that actually mean? If you look at the experience in Europe, there is very little evidence to suggest that carbon leakage was a significant problem and, in the Treasury modelling, there is a suggestion that carbon leakage is unlikely to be a significant issue. You can see that by the fact that there is employment growth in all major employment sectors. But that is why I emphasise that this scheme is actually directed at two issues—not just at carbon leakage, which is obviously critically important, but also at helping Australian firms and Australian jobs in the transition to a low-carbon future.

Senator JOYCE—We have found that the belief in the scheme is so deep that we do not believe in handing back the money if it is wrong. How are you actually going to assess—

Dr Parkinson—I am sorry, Senator, I never said that.

Senator JOYCE—So you are going to hand it back if it is wrong?

Dr Parkinson—Senator, it is a policy decision.

Senator JOYCE—Your knowledge of the subject should be sufficient, Dr Parkinson, that you can answer that question as a ‘yes’ or a ‘no’.

Dr Parkinson—The scheme does not provide for revenue to be put aside—

Senator JOYCE—That is the answer, Dr Parkinson. Very good.

Dr Parkinson—Senator, the scheme does not provide for putting moneys aside to be paid back at some point in future. Let us say it did. Where would that money come from? Well, either it would come because you have reduced support to industry, or it would be because you have reduced support to households. These are policy decisions, but were a government, either current or future, to decide that it wanted to create a contingency reserve to do this, then it could be done. It is no problem, but you just have to realise—

Senator JOYCE—Dr Parkinson, you interrupted me, so I am going to interrupt you as I go back to the issue, right? The issue that I clearly asked was that if, in the process as you understand it, the warrant that is indelible in the fact that you are selling a product turns out to be erroneous, there is no contingency to hand the money back—that is: ‘We got it wrong, so you can have your money back.’ It is a case of: ‘We got it wrong, but we keep your money in any case.’

Dr Parkinson—What about income—

Senator CAMERON—What a stupid analogy!

CHAIR—I think Dr Parkinson has indicated that is a policy decision, so—

Senator JOYCE—The next thing is, what is the actual process of assessment? Who are the actual people who are wandering around assessing how much carbon is being exuded into the atmosphere by industry? Who is doing that?

Dr Parkinson—Australian firms.

Senator JOYCE—Who are they?

Dr Parkinson—There are a range of ways in which this is done, domestically and globally. You know how much petrol, for example, is purchased and used in Australia, and you know the CO₂ concentration from the use of petrol.

Senator JOYCE—Who is doing the assessment? Which departments?

Dr Parkinson—That is done by our department at the moment—

Senator JOYCE—Your department will do it?

Dr Parkinson—in terms of the national inventory. But in terms of the National Greenhouse and Energy Reporting System, individual firms are counting.

Senator JOYCE—Individual firms? Can you name a couple for me?

Dr Parkinson—I am not going to name any individual firm.

Senator JOYCE—Do you know of any?

Dr Parkinson—Of course I know of them.

Senator JOYCE—Can you name one?

Dr Parkinson—There are 1,280 or thereabouts.

Senator JOYCE—Well, name one.

Dr Parkinson—I do not think it is appropriate.

Senator JOYCE—Why not?

Dr Parkinson—Any firm that is currently registered for NGERs, the National Greenhouse and Energy Reporting System, will be liable—any large emitter, any of the aluminium smelters, any of the iron and steel companies.

Senator JOYCE—I have asked you to name just one firm.

CHAIR—Senator Joyce, it might help Dr Parkinson if he knows where you are going with this.

Senator JOYCE—He keeps interrupting me. I am just asking if he can name one firm that will be going out and doing this assessment.

Mr Comley—I think the problem that Dr Parkinson is alluding to is that the NGERs system started on 1 July last year, but there has not yet been the mandatory reporting date determined for that scheme. That first comes at the end of next financial year. There is a question of appropriateness of whether we would stand here now and name particular firms that are likely to be liable parties. You can think of a range of facilities that are almost certainly going to be liable parties—for example, aluminium smelters, iron and steel works—

Senator JOYCE—I want to know the people who are doing it. Is there one person I can be directed to who would actually be doing the assessment process?

Mr Comley—What Dr Parkinson was about to explain is that, under the CPRS, there is a process that is gone through. The first step is that individual liable parties, and facilities such as

smelters and blast furnaces will be liable facilities, are required to put a report into the Australian Climate Change Regulatory Authority with a number of emissions.

Senator JOYCE—So, will they self-assess?

Mr Comley—Can I just finish? It is a self-assessment process. However, if you are an emitter of more than 125,000 tonnes per year, you are required to get third party audit and verification of your emissions.

Senator JOYCE—Just give me one example of one of those third party audit verification bodies. I do not want to know whether you are going to employ them or not; I just want to know—

Dr Parkinson—There is actually a process by which auditors have to be accredited. That process, I think—

Mr Comley—The department is currently consulting on the final form of the regulations.

Senator JOYCE—Have you accredited any yet?

Mr Comley—We have not because there has not been a final decision on the nature of the accreditation. There has actually been quite widespread consultation on, for example, whether it should be only financial accounting firms or whether it should be engineering firms or whether you should require a panel of people who have engineering, emissions and audit expertise.

Senator JOYCE—And these people will wander out and do their assessments?

Mr Comley—These people have to be accredited to provide these services. If you have more than 125,000 tonnes per annum in emissions, you are required to have a third party audit by an accredited auditor before you submit your emissions and then—

Senator JOYCE—What—

Mr Comley—Sorry, Senator, but this is important. The Australian Climate Change Regulatory Authority will undertake a risk based auditing mechanism.

Senator JOYCE—What credentials will these accredited firms require?

CHAIR—Senator Joyce, we only have a couple of minutes left. We are over time and I am aware that Senator Xenophon has not asked his questions yet. So, could you just wind up soon.

Dr Parkinson—I can be very quick. That is actually what we are consulting about.

Senator JOYCE—So we have not got any yet? Okay.

Senator XENOPHON—I foreshadow, Chair, that there might be a number of questions that will need to be taken on notice. I will just touch on a few issues. I recently spoke to a generator

that runs a supercritical coal plant and their complaint was that brown coal generators were getting free permits and, even though this generator was much less energy intensive than the brown coal generators, they were not going to be able to get any free permits, as I understand it. So they would be at a significant disadvantage and they would be looking at quite a significant cost. That was their complaint. Is that an anomaly in the scheme?

Dr Parkinson—No, what has been described to you is erroneous. That generator is actually advantaged relative to existing brown coal generators. The reason is that the price of electricity will rise throughout the system. If you are a brown coal generator, you typically emit more than 1.2 tonnes of CO₂ per megawatt hour. A black coal generator is around 0.8 or 0.9 tonnes. A gas generator is down further still, and if you are a renewable power generator, you are nothing. But the electricity price increase will actually be determined by the marginal player in the market. On all of the evidence that we have, we think that that will be the black coal generators. The electricity price will rise. That will go some way to offsetting the cost impost on the black coal generators. The brown coal generators, because they will have to buy more permits than the black coal generators, will face a bigger cost impost and the electricity—

Senator XENOPHON—They will initially get free permits, though, will they not?

Dr Parkinson—That is right, and the Electricity Sector Adjustment Scheme is designed to look at the loss of asset value for generators and then distribute the \$3.5 billion that has been put aside according to their relative emissions intensity. So the higher the emissions intensity, the greater the loss of asset value, so the more likely you are to gain some share of that pool of compensation, but the pool of compensation is only partial.

Senator XENOPHON—You are saying, then, that the decline in value of the supercritical black coal generator will be—

Dr Parkinson—It is unlikely to be as significant as the decline in value of the brown coal generators.

Senator XENOPHON—You are quite certain of that from the modelling and you are saying that is axiomatic—

Dr Parkinson—It is just a logical result. It is borne out by the modelling, but it is a logical result because the price is going to come up by a certain amount and, since the black coal generator needs to buy fewer permits than does the brown coal generator, it has a relative advantage. It does not mean that it is advantaged, but it means it has a relative advantage. That is spelled out in Chapter 13.

Senator XENOPHON—Maybe I will put some further questions on notice. While I do not subscribe to the view that we should wait to see what everyone else is doing, I do have some questions in relation to the whole issue of what other countries are doing. The Obama administration has indicated that they will be doing something about this—I think they have said a cap-and-trade scheme, is that correct?

Dr Parkinson—Yes.

Senator XENOPHON—But they have not spelled out the design of that scheme, have they?

Dr Parkinson—No, not yet. There are a range of bills that have been before the Senate and the House, but there has not yet been that process, typical of the US system, of settling on designs ready to try and get passage through both the House and the Senate.

Senator XENOPHON—It would be fair to say, though, that within the umbrella of a cap-and-trade scheme there can be variations on a theme, can there not, in terms of achieving the end?

Dr Parkinson—Absolutely, and they come down to some of the things that I talked about in my opening statement: the degree of coverage, the extent to which you want to provide assistance for your emissions intensive and trade exposed and how much you want to give to households or to other uses of revenue that you might raise.

Senator XENOPHON—Further to that, you have mentioned the proposed Canadian scheme. We do not know what they will be doing given that it depends on what the Obama administration will be doing, but you have said that, with an intensity based scheme, you do not have the same degree of certainty as the proposed model. Is that a fair summary?

Dr Parkinson—Absolutely. You have no degree of certainty over the absolute emissions reductions.

Senator XENOPHON—But do we not have a degree of uncertainty—some would say a significant degree of uncertainty—with respect to the current scheme, in the sense that you have banking in credit, you have gateways, and there are a issues of leakage. No scheme can be absolutely certain, given the variables that could apply.

Dr Parkinson—You are absolutely right about banking. But if Australian firms bank, then it means that Australia has actually reduced its emissions by more. The risk with the Canadian scheme is that you cannot have any guarantee that you will get to a particular quantity of reduction. Banking—to the extent that it introduces a ‘risk’ to the Australian scheme—means that you actually overperform against your targets in the earlier years. International linking does not impact on your ability to hit your target; it is actually part of how you hit your target. If you did nothing to deal with the issue of carbon leakage, you are still going to hit your target because the target is the target. It is the quantity of emissions that you are taking out of the system. If there is leakage—that is, if somebody closes down—those emissions are outside the system. You do not want them to close down and set up shop somewhere else, which is why we have gone through this exercise with the EITE policy.

Senator XENOPHON—There would be different price effects. Depending on how you design the scheme you could get different price effects, for instance, in energy prices. The corollary of that is that if you have a less severe price effect with a particular design, you could go for deeper cuts.

Dr Parkinson—That is right. But how do you actually get least cost? You actually have as broad as practical coverage. The government and we—in terms of our advice to the government—were very adamant that coverage should be as broad as practical. If you take our

scheme and start to give out exemptions, to take industries out of it, you actually raise the cost of abatement for the economy as a whole.

Senator XENOPHON—The breadth of coverage is part of it. But also, isn't it relevant in the context of the price effects? For instance, one of the criticisms of the government's scheme, or what has been proposed, is that there is a lot of revenue churn. There is much more churn in the sense that you have to recycle the revenue or the permits. I think Mr Comley is aware of that argument. But is the extent of churn a factor in the price effect and in the efficiency of the scheme?

Dr Parkinson—No, not at all.

Mr Comley—In fact, I think at times it can be the opposite. If you have a scheme that suppresses the price impact on households, which I think some have advocated that the Canadian scheme does, that has the effect of reducing the incentive for households to reduce. And this comes back to Senator Pratt's comment earlier. If you suppress that demand-side response, you actually have to make the rest of your scheme—the industry production side—work harder if you want to meet a particular emissions reduction target. A number of people make comparisons between schemes and say, 'This is lower cost'. But it is actually because they are fundamentally trying to achieve a less ambitious emissions reduction target.

Dr Parkinson—It is ultimately the target that determines the cost.

Senator XENOPHON—Not variations of scheme design?

Dr Parkinson—Scheme design can exacerbate the cost. But what we have attempted to do here is deliver the least cost way of achieving any given target. As Mr Comley was saying, and as I was saying earlier, if you somehow relieve the pressure on households or you somehow relieve the pressure on particular sectors of business, the net effect is that you push the cost of the scheme up. Often this debate about the relative cost of the scheme is really not actually about the design of the scheme; it is actually about the targets.

Mr Comley—But it is true that some scheme designs will increase cost. For example, if you completely exempted some emissions intensive industries, you would have a higher cost to achieve an emissions reduction target than the current EITE policy, because it maintains incentives to reduce emissions.

Senator XENOPHON—In the remaining 10 seconds—

Dr Parkinson—We are happy to take anything on notice.

Senator XENOPHON—My final question is about this whole issue of international links with banking. You say that it could actually work to your advantage in terms of the scheme, but what about if you have a scheme that has international links with borrowing? That is the flip side, is it not, in terms of the impact?

Dr Parkinson—That is right. You do not even need the international linking if you can just bank and borrow—even in an autarkic scheme: one that has no links. If you bank this year—and

this is the first year—then what you have done is you have overachieved, because you have actually reduced emissions to less than the amount you issued permits for. Equally, if you borrow from the future, then you will have actually emitted more than your target. So you are right—borrowing has implications. Banking and borrowing become important when you think about how you want to link systems internationally.

CHAIR—Senator Xenophon, do you have written questions on notice?

Senator XENOPHON—No, I will prepare them as a result of tonight. Should I put questions on my favourite topic—computable general equilibrium models—to Treasury, or to you guys?

Dr Parkinson—We are happy to take it, but it is going to come back to Treasury.

CHAIR—There will be questions on notice from Senator Xenophon. Are there any other members with questions on notice?

Senator CAMERON—I have one.

CHAIR—Thank you to the officers of the Department of Climate Change.

Committee adjourned at 8.46 pm