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STANDING COMMITTEE ON ECONOMICS

Reference: National Market Driven Energy Efficiency Target Bill 2007 [2008]; Renewable Energy Legislation Amendment (Renewable Power Percentage) Bill 2008

MONDAY, 12 MAY 2008

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SENATE STANDING COMMITTEE ON

ECONOMICS

Monday, 12 May 2008

Members: Senator Hurley *(Chair)*, Senator Eggleston *(Deputy Chair)*, Senators Mark Bishop, Bushby, Joyce, McEwen, Murray and Webber

Substitute members: Senator Allison to replace Senator Murray

Participating members: Senators Abetz, Adams, Allison, Barnett, Bartlett, Bernardi, Birmingham, Boswell, Boyce, Brandis, Bob Brown, Carol Brown, George Campbell, Chapman, Colbeck, Collins, Coonan, Cormann, Crossin, Ellison, Fielding, Fierravanti-Wells, Fifield, Fisher, Forshaw, Heffernan, Hogg, Humphries, Hutchins, Johnston, Kemp, Kirk, Lightfoot, Lundy, Ian Macdonald, Sandy Macdonald, McGauran, McLucas, Marshall, Mason, Milne, Minchin, Moore, Murray, Nash, Nettle, O'Brien, Parry, Patterson, Payne, Polley, Ronaldson, Scullion, Siewert, Stephens, Sterle, Stott Despoja, Troeth, Trood, Watson and Wortley

Senators in attendance: Senators Allison, Birmingham, Bushby, Eggleston, Hurley, McEwen and Webber

Terms of reference for the inquiry:

To inquire into and report on:

National Market Driven Energy Efficiency Target Bill 2007 [2008]; Renewable Energy Legislation Amendment (Renewable Power Percentage) Bill 2008

WITNESSES

Committee met at 9.29 am

CHAIR (Senator Hurley)—Thank you for attending. I declare open this public hearing of the inquiry into two private senators' bills, the National Market Driven Energy Efficiency Target Bill 2007 [2008] and the Renewable Energy Legislation Amendment (Renewable Power Percentage) Bill 2008. The National Market Driven Energy Efficiency Target Bill 2007 [2008] was referred to the economics committee on 16 August 2007 for report by 22 October 2007, later extended to the end of the 41st parliament. Consideration of the bill having ceased with the calling of the election, the bill was restored to the *Notice Paper* on 14 February 2008 and re-referred to this committee. The purpose of the National Market Driven Energy Efficiency Target Bill 2007 [2008] is to amend the Renewable Energy (Electricity) Act 2000 to promote increased energy efficiencies and cost-effective greenhouse gas abatement through the establishment of a market for energy efficiency. The Renewable Energy Legislation Amendment (Renewable Power Percentage) Bill 2008 was referred to this committee on 12 March 2008. The purpose of the bill is to extend the renewable power percentage targets beyond those currently set out in the Renewable Energy (Electricity) Regulations 2001. The committee is considering the bills concurrently. It is due to report on 30 May.

[9.31 am]

LISTER, Mr Mark, Group Manager, Corporate Affairs, Szencorp Sustainable Development

CHAIR—Before the committee takes evidence, I advise that all witnesses appearing before it are protected by parliamentary privilege with respect to their evidence. This gives them rights and immunities in regard to what they say so far as it is relevant to the inquiry. People must be able to give evidence to committees without prejudice to themselves. Any act which disadvantages a witness as a result of evidence given before the Senate or any of its committees is treated as a breach of privilege. Witnesses may request that part or all of their evidence is heard in private. I remind witnesses that giving false or misleading evidence to the committee may constitute a contempt of the Senate. I welcome our first witness. Thank you for your submission. I understand you are here to speak about the National Market Driven Energy Efficiency Target Bill 2007 [2008]. I ask you to make a brief opening statement if you wish.

Mr Lister—I would like to make a brief statement and, as you mentioned, I will be speaking solely in regard to the National Market Driven Energy Efficiency Target Bill. Szencorp is a company involved in energy efficiency and property developments. We are involved in the building sector and I suppose you would characterise our main enterprise as the energy use in buildings. The building sector makes up about 130 million tonnes, about 23 per cent, of Australia's 560 million tonnes of emissions, which is not an insignificant proportion of the emissions. A lot of work has been done, as the committee would be aware, looking at the cost-effectiveness of reducing energy use in the building sector. There is quite a lot of work which we can go into in some further comments that is outlined in our submission relating to the overall cost-effectiveness and the opportunity that exists in using energy more smartly within our buildings so that we can reduce greenhouse gases cost-effectively.

That has been echoed by the IPCC, which identified buildings as the largest sector worldwide at a certain level of cost for reducing emissions. What we find is that we can actually meet Australia's current Kyoto targets for the 2008-12 period and then beyond that we can start to reduce emissions at zero cost, or negative cost—that is, at a profit. So this is an interesting area for a government or a society interested in reducing its greenhouse gas profile without having to impose large economic costs.

We are very much focused on improving the performance of the existing buildings because we find that, the reference period for response on greenhouse gases being that action is required sooner rather than later, seeing that we need to start making some deep cuts in the very near future, the vast majority of our buildings already exist for that reference period. So you are really looking at measures not to target brand new buildings, and a lot of those measures do, such as building codes, planning schemes and building design specifications. They are really targeting new buildings, but we need to find measures and ways of retrofitting buildings, hence the importance of a market based scheme for energy efficiency.

There is a common view that energy efficiency is going to be a by-product of a price on carbon, and that once we implement an emission-trading scheme in Australia that will have an automatic flow-on effect to people picking up energy efficiency—given that that is more cost-effective as energy prices rise. However, I think it has been well-documented over the last few years that a lot of the barriers to people taking up energy efficiency are not related. They are behavioural, they are institutional and they are structural much more than they are driven by price. The quote that I had thought about to explain that is that energy efficiency itself, the saving of electrons in wires, is absolutely invisible. Because it is invisible, we actually look straight past it and we look at things that are more expensive solutions to the same problem. We need to, as policymakers, revisit that and come back towards a focus on this heretofore invisible section.

To sum up why we are big supporters of energy efficiency and schemes to support energy efficiency, the national framework that exists for energy efficiency has more or less failed to deliver. It is a piecemeal approach. There are four or five key areas to target—things like appliance standards and air conditioning in commercial buildings. We do not have an overarching statement of intent in relation to energy savings. We do not have a big picture sensibility in the way that other jurisdictions do. The current government actually made a commitment in November, leading in to the last election, relating to this. They said that a Rudd Labor government would help Australian families and businesses become more energy efficient and put Australia on track to being 'at the forefront of OECD energy efficiency improvement'. We see that as a multilayered statement. Being on track to being at the forefront is not very precise, and this bill will be one of the building blocks, we hope, to start fleshing that out and making that a more tangible target. We have some views on what that target ought to be.

This sort of work is being done elsewhere by other jurisdictions. There is obviously a suite of measures that we need to meet such an energy efficiency aspiration. We see a market based scheme sitting alongside regulation and other more direct fiscal incentives and other awareness raising techniques and so on. There are a whole range of policies that will be required, but we would certainly see a market based scheme fitting well within that. There is a lot of work being done around the world by bodies, like the UNEP and the World Energy Council, that are assessing and evaluating those sorts of policies. So there is a lot of material for the committee to draw on in considering how to proceed.

To finish, in regard to this specific bill, we have no objection to the bill working through the existing legislation for MRET, as it effectively does. We would like to see energy efficiency put on the same platform as the renewable generation sector. We do have questions about the liquidity of this scheme because the examples that we have at the moment, say, in Victoria with the energy efficiency target scheme, which is a very valid example to build from, are only targeting the residential sector at the moment. We would question why because there seems to be no justification for doing that. You could improve the scope, reach and liquidity of the scheme by including commercial and industrial sectors as well. There is also scope to use some of the tools that already exist in measuring and analysing energy performance that that scheme has not considered. So there are some really specific points about the bill. That is really all I wanted to say as an opening statement.

CHAIR—Thank you. Could you perhaps elaborate a little more on the actual detail of the bill? You obviously have support for it in general. What about the workability in general of the bill and the specific details of it?

Mr Lister—As we see it, the workability of it is very much attached to the workability of MRET, which has already been in place for a number of years. The scheme is going to work with the cooperation of electricity retailers and their acceptance of an obligation to retire certificates very much in the same way that the existing scheme works. That is, I think, a fairly straightforward exercise.

The slightly more confusing aspect of an energy efficiency bill is the measurement aspect. We are much more used to, and we can easily calculate, the amount of generation that is coming from a renewable power generator, for instance, which therefore determines how many renewable energy certificates you get. To get energy efficiency certificates—I don't know if they are going to be called EECs—is a more complicated exercise. We really need to establish what the previous baseline for that activity was, and then an incremental improvement. The Victorian scheme, for example, has proposed the extensive use of deeming formulas in relation to specific appliances and specific techniques that would allow you to calculate the useful life of a particular action in terms of the greenhouse saved over the years that that appliance will be in use. That is a valid approach, and I think there is a lot of emerging work worldwide that is showing that that is fairly robust. There is not a lot of difficulty with that approach.

You do have a lot of very small and disparate energy savings that you have to take into account, which is much harder than, say, one large project like a wind farm, where you can say, 'There is the project and there are the savings.' You are looking at a whole lot of individual light bulbs or light fittings and a whole lot of individual appliances, and that makes it much more difficult. But as I said in my introductory remarks, there are tools like the Australian Building Greenhouse Rating scheme, for instance, in the commercial sector which allows you to establish both the baseline performance and then an actual increment in performance. You can compare those two things and retrospectively look at how many energy efficiency certificates would therefore be created. I think there are tools and ways and means of doing it. It is probably not something that we have engaged with as thoroughly as we might, but once we do, I think we will find that there are ways through it. There is evidence, particularly from England and Italy, that shows that these schemes can work quite well in operation, although the evidence is pretty early.

CHAIR—You talk about a zero or negative cost. Over what time frame is that?

Mr Lister—There is a range of different studies that have been done in this space, and some studies—for instance, the Centre for International Economics study from last year—considered just cost-effectiveness or zero net cost opportunities, in other words, things that would pay for themselves within the time frame they were looking at, which was 2030. They established that we could save 30 to 35 per cent of our energy use in that time frame by just using the things that would pay for themselves in that time frame. So that did not consider anything that would actually impose a net cost on the economy; it was just looking at cost neutral, I guess, over that 22-year period. That is a sort of indication over that time frame.

Others have come out and said, 'Let's be much more aggressive'. In fact, the IPCC says that worldwide we would get about 29 per cent by 2020, which is earlier. That is worldwide at no net cost. The McKinsey people, who did a study last year about putting out an Australian cost curve for emission reductions—largely copying some work that was done overseas by a Swedish group called Vattenfall—found a bit over 60 million tonnes per annum of cost-effective greenhouse reductions. I think that is to 2020, which, based on our 560, is just over 10 per cent at zero cost. Obviously, if you are willing to go further and actually pay for energy efficiency, there is a lot of opportunity from zero up to the least expensive of the generation options. So at $5 a tonne, $10 a tonne, $15 a tonne, it is still cheaper to pursue energy efficiency than it is to pursue clean generation. That obviously adds to that figure, if you can picture what I am saying. In looking at what the IPCC had—and I have some slides I can leave with you—the figure that they come up with is to say it is about six gigatonnes of CO2 a year below US$100. That is more than four times the nearest rival, which is agriculture. That is substantially more than the nearest alternative measures at that particular cost. I am not sure if that answers your question. There are certainly a lot of immediate cost-effective opportunities.

CHAIR—What is your feeling of what would be the most likely outcome in Australia or in Victoria, if you like? Is it the 2020 or the 2050?

Mr Lister—We need to make statements about both, I think. We need to start making inroads towards both. The thing about energy efficiency is that it is using existing techniques, simple technologies in many cases—and in other cases not. In many cases a lot of these savings can be unlocked right now. We do not have to wait for some lengthy R&D process or the outcome of a trial or something. These things have been trialled for a long time. We know they work and we can start right now. I think that is really the appeal of energy efficiencies that we have. The cost equation and the immediacy are strongly in our favour and we can get going on that. This is where I come back to saying that the energy efficiency argument, in every study that has been done, should be the first cab off the rank. The fact that it is not, or that it has not been taken up as it could be, shows that there are barriers here that we need to start grappling with in terms of the ability of people to see the opportunity and act on it. There are a lot of informational gaps. There are a lot of transaction costs. You can pull out the economics textbook, look down the list—usually listed in the chapter under market failure—and you will find most of those with some characteristics as they relate to energy efficiency. We need to sharpen our understanding of that. There is a very small amount of work and research that goes into that in Australia.

Senator EGGLESTON—What you are proposing is very interesting and obviously we want to see more renewable energy used. The government does have a proposal to introduce an emissions-trading scheme, which includes setting a target to reduce greenhouse gas emissions by 60 per cent by 2050, consulting with the energy sector on the implementation of a national emissions-trading scheme to start by 2010 and ensuring the equivalent of at least 20 per cent of our electricity supply is generated from renewable sources by 2020. There is a bit of a conflict between your proposal and the government's objectives. Some people even have the view that mandatory renewable energy targets will become irrelevant as the emissions-trading scheme develops because it will include renewable energy. What is your comment on that?

Mr Lister—I agree that there is a fairly widely held view that emissions trading is a panacea and that it will be your greenhouse response strategy. Our answer is that it is not a strategy but is a single, very important measure. A strategy requires a suite of measures and there is a reason certain things will not be brought about by an emissions-trading scheme. A lot of things will and bringing a carbon price into the economy is a huge transition. It really is a centrepiece of any response. Alongside that there is a very well recognised and well studied need to create complementary measures to create specific outcomes that sit alongside the overall carbon reduction outcome. In looking at something like an MRET and why you would need an MRET as a complementary measure, we are talking about the importance of creating a viable and robust industry that can deliver on the sort of scale that it needs to in the time frame. I share your view that, if you have an emissions-trading scheme that is up and running and working properly after a transition period—and we do not know how long that will be—at the end of that time potentially the MRET or REC price should tend to zero. You should be offering the cheapest, lowest form of abatement and if someone can do that without any additional incentive that should remove the need for a renewable energy scheme. But we are not at that point.

The point we are at is that we have an industry which is still having difficulty competing with a heavily subsidised fossil fuel sector. The industry is basically competing with something that through pricing and network structures and so on does not lend itself to a level playing field for competition. If you want to have a viable set of measures in the generation site, you are going to need to bridge that gap somehow. Emissions trading is not going to start cleanly on 1 January 2011 with the whole world changing. There will be a

transition period. For that transition period to end with a viable renewable generation sector, you need to support that in the interim.

Energy efficiency is another key area where you need complementary measures alongside an emissions-trading scheme. As I said in my introductory remarks, we have seen pretty conclusively that as power prices go up energy use does not go down proportionately. It is quite an inelastic thing. In fact, people are happy to waste energy. It is a very small percentage of their outgoings. It is a small percentage of their life, if you like. It is very much out of sight, out of mind. The price response is there already for energy efficiency. People can get strong economic returns by pursuing energy efficiency, yet they do not take it up. My response is on page 3 of my submission to the inquiry. I said:

> ... incremental increases in financial incentives by, for instance, attributing a price to carbon dioxide emissions through emissions trading will not in themselves unlock the energy savings potential through ever louder appeals to economic rationality; complementary measures are required to be directed specifically at initiating smarter energy use.

I am saying that this is not a price barrier. We do not have an issue with price. That is where it is different from renewables. Anyone who studies this long enough and who is willing to pursue it and overcome the barriers—as we have done in many projects and as we have done in our own building in South Melbourne—will find that it is worth it. What we have to try and do is unlock that value that already exists rather than create a price and expect things to follow.

Senator EGGLESTON—I feel a little bit concerned. As you say, it is difficult enough to get business to come along with these sorts of policy changes and proposals. One would not like to complicate the issue too much by having two lots of schemes in operation at the same time. That is my concern, basically. I do not disagree with your objectives, but I think that we should make it as simple as possible for business to become involved in this kind of thing.

Mr Lister—I think it would be quite simple for businesses to be involved. It is more complicated for the energy retailers, and they have a strong view that an energy efficiency trading scheme is too complicated, as you have said. But that is because they have to administer it. We come from a different place. We look at how we create value for people out of energy efficiency. Some of that value supports our business. That is where we differ in view. You are right that it is a difficult sell—the green, white and black trading schemes, if you like—but on the other hand we want them to work and we want the policy to work. If we create an emissions-trading scheme that does not actually release any energy efficiency behaviour, or what comes out of is very incremental, we still need to take that policy step, in our view.

Senator ALLISON—Could you advise the committee on behaviour? You are in the business of refitting commercial buildings. What sorts of clients come to you? There is some refitting going on. There is double glazing being put into major buildings in cities and so on. Is it a particular kind of client who goes for energy efficiency? What are we looking for here? Which group do we want to shift into energy efficiency that is not already there?

Mr Lister—Thank you for the question. Most people are already there in terms of wanting to do something about this. We have seen a huge increase in awareness in the last couple of years with shifts in awareness about climate change. Whereas before there was uncertainty around this issue, there is now much less uncertainty and we really ought to do something.

We are in the commercial space so we deal with commercial building energy efficiency. But obviously there is a big opportunity in the residential sector as well. In terms of the split, it is about 56 million tonnes in the commercial sector and 74 million tonnes in the residential sector, so about forty-sixty in favour of residential. The residential sector is clearly important and both of these sectors are relatively large when you consider the savings that could be achieved. We are really looking at occupiers of buildings and that it is pretty much all of us in some capacity.

The people that are coming to us are saying that they would like to do something about this. They understand that it is cost effective but they do not know how to proceed and how to do it. They are coming up against a whole range of different barriers internally. Typically, the way that it might run is that an owner of a building will say, 'Right, we want to do something about our building. It is an older building and it is not working. It is inefficient and we can do much better.' They have to go through the process of actually explaining that and convincing the financial people within their group, or their company or in terms of owning the building, because energy is a very small percentage of outgoings on any particular site as compared to all the other things. It is a small focus area.

If you are spending two or three per cent of your outgoings on energy, which is typically what a building owner would spend, then even if you could save 20 per cent of that they are saying, 'That is a small percentage. I am not even interested.' That is the first barrier. Then, if you actually have an awareness that, yes, you have to do something about this, you are confronted with the situation of not knowing how to proceed, not knowing what to do. They then have to try and procure some assistance with that. What you will get is maybe an audit done on the building—there is a lot of effort being put into audits. Then people get an audit and they say, 'Right, we could save a percentage here through measures A, B, C and D,' and they are left with that audit report. Then they say, 'How do we implement it? We have to go out and procure each of those things and have it installed.'

That is then competing for budget and capital with a whole lot of other things. For instance, if you are in a hospital, it is very hard to make the case that that is more important than new health equipment. So it is very much a competition. Then even if you do win that competition and you install this new equipment, can you be sure that it actually works and can you be sure that you actually achieve the savings that you set out to achieve? These are all questions and uncertainties that are brought into the situation, let alone some of the institutional barriers to doing this, say, within a company or within government where you can say, 'I'm going to save 50 per cent of our energy budget,' and then the following year your budget gets cut because you obviously do not need that budget anymore. That is something where managers will turn around and say, 'I would rather keep all my budget and have more flexibility than half the budget.'

There are also issues with the time that people are prepared to accept returns on. They say, 'This is something that is nice to have but it is not something that we are being pushed to do. We will do it if it pays for itself in two years.' That logic suggests that your hurdle rate, your internal rate of return, is 50 per cent. That is an enormously high investment rate for any company that invests in hard infrastructure. They would accept a much lower rate of return on a project than they would on an energy efficiency project—which comes back to its invisibility. We are not applying the same logic to this as we are to hard investment in hard infrastructure, hard assets, which we can sell to somebody else. What we are in fact talking about is a shift in mindset that says, 'We are going to invest, not in creating a revenue stream, but in reducing our expense stream.' That does not necessarily compute with us in the way that we have learnt to actually apply in our financial analysis.

Senator ALLISON—So how does a trading scheme like this change that, because it would not, on day one, affect every business? Who would be the early movers and why, under a scheme like this?

Mr Lister—What I have been talking about is those people who are grappling with and working through the barriers and then and having to do that sell internally. How does someone interested in this make it happen in an organisation or institution? There are a whole lot of people, groups, committees and so on that they have to convince along the way.

What it does is impose an obligation on energy retailers, where there is not one at the moment, so they end up with a vested interest in seeing this happen. That is important because then you have got an energy retailer or company on the other side of the equation not saying, 'We want to sell you more energy, use as much as you like,' but saying, 'We have actually got a vested interest in you pursuing this.' That becomes a stakeholder on the other side of the equation in terms of that internal sell. Then it also affects the economics of the situation: whilst it is already favourable, it becomes more favourable. For anyone who is yet to be convinced and who is applying a 50 per cent rate of return, it means that within that rate of return you can do a whole lot more—a 50 per cent rate of return might get you three or four years of payback rather than one or two years, so instead of just doing the lights you do the lights and the air conditioners. You suddenly get to extend the reach of energy efficiency knowledge and energy efficiency take-up.

Our strong experience is that people who take the first step into this area take the second and then the third. They say, 'We have actually seen the benefits now and we will go ahead and do it.' That is why it is part of a suite of measures to unlock that potential. And a market based measure is important because it allows for the possibility that whatever opportunities are there are pursued at least cost. There is a strong argument for doing that and it is the same argument for why you use emissions trading rather than other measures to reduce carbon dioxide.

Senator WEBBER—In your opening remarks you described—I am paraphrasing here—the current structure as a piecemeal approach. If we adopted this before we waited for Professor Garnaut to report and brought in Australia's own ETS, wouldn't we be guilty of the same charge of adopting a piecemeal approach to addressing these concerns?

Mr Lister—In relation to the emissions-trading scheme, we already have the overarching target. We have a commitment that we need 60 per cent emissions reduction by 2050. That sets the frame for us, if you like, although some have already argued that that is possibly not ambitious enough. But what that framework is going to set out are some interim targets and therefore how we expect the transition to look. That is enough to be able to set a frame for energy efficiency because obviously, as we have said, energy efficiency is the first cab off the rank or the most cost-effective option in achieving that target. We can aim for the available energy efficiency. In fact, the government has already done that—we have this target which, as I said, is a little bit multilayered but which is on track to being at the forefront of OECD energy efficiency improvement. So we can use this target as part of this bill to articulate what that really is and we can use a trading scheme in no small measure to deliver on it.

I do not think that puts the cart before the horse. What it does is say, 'We need to take action now, and we need to take action that is cost effective as soon as possible.' And the only real option available to do that is energy efficiency. There are other things that are going to cost the economy, that somebody is going to have to pay for. The estimate that we have got from the Centre for International Economics is that if we pursued just that cost-effective energy efficiency opportunity we would create a $38 billion a year dividend for the economy.

Senator WEBBER—You do not see an ETS as creating the market that would therefore drive energy efficiency? In places like Europe, people talk about energy poverty and they do not see the price of energy as being as inelastic as you are saying.

Mr Lister—The price barriers are certainly not all of the picture. Emissions trading will not specifically target energy efficiency, so it will continue to look straight past the energy efficiency opportunity, as we do now. What we need are measures specifically designed to create—

Senator WEBBER—To go to emissions trading now—

Mr Lister—I am saying when we do do emissions trading we will continue to look past it.

Senator WEBBER—So you are saying that that will have no impact?

Mr Lister—We need specific measures, and it is not just a trading scheme. We are arguing strongly that we need things like a reorganisation of the way that we price electricity distribution. At the moment, about half the cost of the electricity that we are experiencing in this room relates to the wires and the poles and the transmission network that brought it to us. So we have this very centralised view of the world which says, 'We're going to create large-scale generation, we're going to create large networks to bring it all to us and we're all going to pay for that.'

Our argument is that rather than generating another megawatt of electricity in the outback somewhere—in the case of geothermal, it is miles and miles from any population—and building huge networks to bring it to us and all paying for it, we are much better off to save a megawatt here. It is the same result: you are reducing pressure on the system by one megawatt. We can do it for a fraction of the cost of that generation infrastructure. We spend $4 billion to $6 billion a year on infrastructure; that is the current figure according to the National Electricity Market Management Company. We could divert some of that towards more small-scale smart energy demand side or efficiency solutions and achieve the same result in terms of relieving the network and increasing its ability to supply our needs at an absolute fraction of the cost. That creates a public policy or fiscal justification for a reallocation of, say, 10 per cent or 20 per cent of that fund—which is $4 billion to $6 billion; we have $24 billion over the next five years just to spend on poles and wires to bring electricity to us—towards smarter energy use. In the end you are going to deliver an economically efficient outcome on an economy-wide basis and you are also going to deliver greenhouse reductions on the way.

So we are saying that there are smarter ways to do things. We need to rethink some of the very ingrained mentalities and practices that we have in energy. They are the sorts of barriers that we need to overcome. It is not just about a price; we can put a higher price on electricity. We have seen that when petrol price goes up people keep using it. Electricity is not as inelastic as that but it is quite inelastic and we will see that an increase in the price of electricity will create an impost on households but it will not really reduce emissions. We need specific measures to target energy efficiency.

Senator BIRMINGHAM—Thank you for your presentation this morning. You have talked about the inelasticity of electricity prices. Obviously, state and federal governments run a lot of grants programs to encourage people to install solar systems. We have star rating systems and so on. Can you tell me why you are

convinced that the proposal before us today in this legislation will effectively change consumer behaviour and increase energy efficiency where other methods have failed?

Mr Lister—That is a really good question. Our view is that all those schemes are important and useful, and they are the kinds of broad range measures that you need. You need minimum standards for your appliances and you need to reward the end user for solar panels or for the installation of insulation, which is really cost effective. So rebate schemes have been widely used—pretty scattergun in many cases. This is potentially a way of rolling that up and providing some structure. The important thing in trying to figure out why this is any different is that it imposes an obligation on the retailer. One of the big barriers is that we have energy retailers at the moment who, through regulated pricing, are benefiting financially when they sell more electricity. If you talk to the retailers they will say things like, 'We achieve a better margin on our energy efficiency products than we do on selling electrons so we are very focused on selling energy efficiency products,' but if you look at the percentage share of revenue streams that they have you will find that it is still pretty heavily weighted in terms of the sale of electricity. So what you are doing is imposing an obligation on those companies to redress that a little bit.

We have to break down all the barriers at all the points in the chain. There is information and awareness at the household level; there are supplier and supply chain issues on the way through; there are the electricity retailers; and then there are governments and so on. We really need to look at that energy use pattern and how it flows through from generation to transmission to end use and try to have measures that will help overcome barriers at each of those stages. This measure in particular, where we are looking at an energy efficiency trading scheme, allows allocative efficiency but the obligation on the retailer is key—the obligation for them to say: 'We now need to actively pursue energy efficiency maybe more so than we did previously.' In fact, if they are clever about it they can pursue it at a profit and they can set themselves up as energy efficiency operators and claim back some of the value they are creating for customers through implementing energy efficiency. So it can start to push that wholesale shift in motivation for really key players in the chain, the energy retailers.

Senator BIRMINGHAM—You cited some international examples—California, Maryland, New Zealand—in the PowerPoint slides we have been given. Are there any examples that stand out as being comparable to the legislation we have before us and that have been in operation long enough for us to be able to say this is a success and these are the reasons why it has worked?

Mr Lister—I do not think we have anything that has been in place long enough. I am certainly not enough of an expert on the UK and Italian schemes to be able to say what the pitfalls are and what we could apply or bring into this scheme. Certainly, the early evidence says that they are working and creating a degree of energy savings. Certainly they are setting much more ambitious energy targets than anything we are looking at. At the moment we are looking at 2.3 per cent growth per year in electricity consumption and they are looking at one or two per cent consumption reduction year on year, that is, a gross reduction—let alone the greenhouse intensity of what is left. They are going much more ambitiously towards this space.

In terms of the operation of schemes, I think VEET—the Victorian Energy Efficiency Target scheme—is going to be a really good reference point. That comes into practice shortly. There is a lot of evidence to say that these schemes work. MRET, for instance, which we have not commented on, is using the same methodologies and the same legislative mechanisms and that has been a huge success in stimulating growth in the renewable sector. We would see it as being similar in operation to that. The experience is still a little early and I do not have enough detailed knowledge about it to be able to give you a strong assessment. But we can certainly point you to the documents that have been put out analysing those schemes.

Senator BIRMINGHAM—If you could provide some of those it would be helpful.

Mr Lister—Yes.

Senator ALLISON—There is a story in the *Age* this morning that demonstrates that despite standards in residential buildings the overall level of consumption of electricity in those new buildings has increased because of more lighting and the bigger size of houses. What is the risk of this system not dealing with that? We have to start with standards so we know what the baseline is, but what is the risk that there will, nonetheless, be a growth in consumption through other kinds of changes?

Mr Lister—Obviously the package of measures that is put together to bring greenhouse gases under better control will include an emissions-trading scheme and measures to support specific areas of the economy to take on certain practices. All of that has to work in concert. There is always the risk that whilst you are saving

a certain amount of energy it is, through various other reasons, growing out of hand. That is the experience in Australia. You can look at the figures and say that since 1990 we have grown our emissions by eight or nine per cent—depending on who you talk to. We have almost doubled our economic growth in that time so we have actually reduced our emissions intensity fantastically well, so we should pat ourselves on the back. This is a physical characteristic: we need to reduce the absolute number of tonnes of greenhouse gas being emitted into the atmosphere. So if good measures in place are actually being overtaken by other changes and increases elsewhere then we need to redouble efforts and start looking at more aggressive schemes and other measures to capture things. That is a watching item for the government in terms of being able to see the effectiveness of what they have done versus the overall requirement that there is a physical reduction in greenhouse emissions. I am not sure whether that answers your question.

Senator BUSHBY—Mr Lister, I was interested in a comment you made in your opening statement that buildings account for 23 per cent of emissions. Is that just energy usage, or is it also other factors such as the emissions associated with building materials and things like that?

Mr Lister—There is a crossover if you are looking at where the emissions take place from generation. Generation and stationary energy typically account for nearly 50 per cent—it is about 35 per cent electricity and 15 per cent direct combustion, particularly in industry and in wood heating and that kind of thing. The use in buildings is a crossover with the generation figure. I would have to go back to the ABS data that that came from or the ABARE data set. Certainly, there is a significant proportion of energy used in building and construction in Australia, as you rightly point out. It is less here than in somewhere like China. If you look at China and in other places like the Middle East, there is building going on at a rapid pace, and that sector is much, much bigger in those places. It is a crossover with building use, energy use and where it is generated, and it depends where you measure it. That 23 per cent is about energy that is used in buildings, effectively.

Senator BUSHBY—Is that the energy that is used on a daily basis?

Mr Lister—It is primarily that. I would have to check specifics about use versus construction process. The construction process can be quite significant in the overall use, and as this comes through and there is more of a sensibility about emissions in relation to building, I think we will see a decrease in competitiveness of new buildings versus the refurbishment of old buildings, specifically on that point. But, at the moment, I don't think any emissions scheme is proposing to capture construction emissions.

CHAIR—Thank you for attending the hearing this morning, Mr Lister.

Proceedings suspended from 10.17 am to 10.30 am

KEEN, Mr Gordon, Issues Manager, Emissions Trading, ExxonMobil Australia Group of Companies

YOUNG, Mr Robert B, Issues Manager and Government Relations, ExxonMobil Australia Group of Companies

FISHER, Dr Brian Stanley, Private capacity

CHAIR—I welcome to this hearing ExxonMobil Australia and the Australian Petroleum Production and Exploration Association. Thank you for the submission from ExxonMobil Australia which you sent to the committee. I understand that you here to speak about the Renewable Energy Legislation Amendment (Renewable Power Percentage) Bill 2008. I invite you to make a brief opening statement if you wish before we begin questions. Do you have anything to add about the capacities in which you are appearing?

Mr Young—Dr Fisher is the main author of some work commissioned by APPEA, and appears here in that regard. Thank you for the opportunity to be here today and for the time provided to us to share our views and answer any questions that you may have. As you may be aware, the ExxonMobil Australia Group of Companies is the largest integrated petroleum company, with a business history stretching back about 110 years. Our activities cover the exploration for and production of oil and gas, petroleum refining and the marketing of natural gas, liquid fuels, lubricants and chemical products. Given the role that we play in the energy sector and the vital role that energy plays in all of our lives, we believe that it is important to encourage every opportunity for open and informed debate about our energy future. We commend this committee for playing an important role in that ongoing public dialogue.

As you would be aware, policymakers, not just in Australia but globally, are currently assessing a variety of the options to mitigate greenhouse gas emissions. In our view, assessing these options requires an understanding of their likely effectiveness, scale and cost, as well as their implications for economic growth. Within ExxonMobil, we analyse and compare the various policy options by evaluating them on a number of criteria. Specifically, these are the degree to which they: ensure a uniform and predictable cost of reducing CO2; maximise the use of market forces; minimise complexity and administrative costs; maximise transparency for companies and consumers; and adjust to future developments in climate science.

Against this background, ExxonMobil is actively assisting and providing input to the development of Australia's policy responses to the risks posed by global climate change. We have provided our views both to Professor Garnaut and relevant state and federal ministers on the key design features for an Australian ETS. In our discussions with the Garnaut review and with governments, we have also recommended that policymakers ensure that existing and proposed policy settings are consistent with the development of any future ETS. In particular we have identified several areas for specific review and/or rationalisation. For the purposes of this inquiry I will restrict my comments to the most germane issue: the compatibility of a mandatory renewable energy target, an MRET, with an Australian emissions trading scheme.

As we understand it, the object of the bill being examined by the committee is to expand the interim targets of the MRET from 2008 in line with government's election policy for a 20 per cent target by 2020. While we have not commented on the technical specifics of this proposal in our submission, I would acknowledge that the bill is a genuine attempt to create greater certainty and continuity for those companies that will need to supply or meet the MRET. However, when building stable regulatory frameworks, we believe that it is important that policies not be considered in isolation and that unintended consequences are considered. As such, our more fundamental concern is that setting a mandated target for any particular source of energy is inconsistent with pursuing the development of an emissions trading scheme.

At its heart, an emissions trading scheme is designed to let market mechanisms set a price for carbon emissions and thereby determine the appropriate energy mix in a carbon constrained economy. By extension of this point, we believe that any mandated target will distort the market and as such is counterproductive to the efficacy of an ETS. In this context, APPEA, the national upstream oil and gas association, of which ExxonMobil is a member, engaged Access Economics and CRA to model and report on the efficiency implications of establishing the government's proposed 20 per cent MRET in conjunction with an ETS. As I said earlier, Dr Fisher, who sits beside me, was the main author of that report, and is available to comment on the specifics if required.

Dr Fisher's analysis showed that the combination of both an ETS and an MRET results in more costly outcomes for the same level of abatement than the implementation of a domestic ETS alone. This is because an MRET forces high-cost renewable energy into the electricity generation mix at the expense of exploiting

lower cost emissions abatement opportunities such as gas-fired power generation. In summary, to reach a prescribed emissions target of 67 million tonnes of CO2, Dr Fisher found that by 2020 the combined ETS and 20 per cent renewable energy target, rather than just an ETS alone, could result in $1.8 billion more in costs, result in the loss of 3,600 full-time equivalent jobs, cause substantial switching away from lower cost gas-fired generation and result in electricity prices rising by six per cent.

Professor Garnaut in his interim report points to a similar conclusion, noting that the MRET would cut across an ETS and impede its ability to deliver least-cost abatement through carbon pricing. Similarly, the Productivity Commission have reached a preliminary view that an MRET operating in conjunction with an ETS:

... would be unlikely to achieve extra abatement, it would constrain the choice of abatement options (which could potentially cost billions of dollars) and reduce the incentive to use other new low emissions technologies.

For this reason Chairman Banks of the Productivity Commission has stated that the apparent special status accorded an MRET needs to be rethought. In light of this broad economic consensus, at ExxonMobil we recommend that potential policy settings and programs, such as the continuation of an MRET, need to be considered in conjunction with other proposed climate change policies, in particular a domestic ETS. Thank you for the opportunity to make an opening statement. We would now be happy to take any questions that you may have.

Senator ALLISON—The work that has been done for you on this issue demonstrates that an MRET is an inefficient way of delivering savings of 67,000 megatonnes of CO2 equivalent. What would 67,000 megatonnes deliver by way of overall reductions in greenhouse?

Mr Young—I do not think I could answer that off the top of my head. I am not sure I have the maths.

Senator ALLISON—Why was that figure chosen?

Mr Young—I might ask Dr Fisher to speak to that specifically.

Dr Fisher—This work was done prior to the election last year, so there were no details available with respect to what the targets might be for an ETS and there was not all that much detail with respect to the proposed MRET. So what was done basically was to choose to do two simulations. One was to set out a policy where you implemented MRET and the other one was to set out a policy where you implemented MRET plus an ETS, and then the comparison was made between—

Senator ALLISON—Sorry to interrupt, but I can see that in the points that you make. I am just trying to understand where the 67 megatonnes of CO2 equivalent fits in the scheme. Will that deliver us a two per cent reduction in greenhouse emissions?

Dr Fisher—No, it was not designed like that. The two simulations deliver an equivalent amount of a reduction so that we—

Senator ALLISON—I realise that, but one of the flaws in your argument is that, if we were to proceed with shifting to gas and not proceed with renewable energy, that would be more efficient. That is essentially what you are saying to us, isn't it?

Dr Fisher—The study is saying that it does not matter how much reduction you choose, whether it be a 20 per cent reduction below 1990, or a five per cent reduction or a plus five per cent growth, an MRET by itself will be less efficient than an emissions trading scheme. The reason for that is—

Senator ALLISON—Dr Fisher, surely there is a point where gas generated electricity can no longer meet certain targets.

Dr Fisher—Senator, this is not about gas by itself. This is about a situation where we are asking the question: what is the best way to deliver an emissions reduction across the economy as a whole? MRET itself can only deliver effectively in electricity. An ETS delivers emissions reductions potentially across the entire economy for the sectors that are covered. The proposal, as I understand it—and we are not sure exactly what the design will be yet—generally speaking, is that we should include as many sectors in the ETS to be introduced on 1 July 2010 as possible. Effectively what we are saying therefore is that, instead of just highlighting electricity as a means of reducing emissions, highlight the entire economy and therefore it must be cheaper to reduce a given amount of emissions from the entire economy than from one sector alone. That is simply what this study says—basically the broader the coverage, the cheaper the cost.

Senator ALLISON—Nonetheless, your complaint about MRET is that it excludes gas, essentially?

Mr Young—No, Senator, not at all. From an ExxonMobil point of view we simply make the first principle point of saying that you should not necessarily pick one particular energy source over another but allow the marketplace to work. As Dr Fisher mentioned, our principles point to having a comprehensive scheme and setting a framework around that where the market determines the most appropriate energy source. In our submission we have listed, as one example, that gas today is the lowest cost mitigation option. However that should not be read to say that we are suggesting gas should be given some special treatment or that it should be included in renewables or any other target. We are saying: establish a market framework with some of the principles I outlined and gas can compete along with other sources of energy in that framework.

Senator ALLISON—Wouldn't you agree that there is a problem if you end up meeting the first round of targets with gas, principally, yet have not developed your renewable energy sector? Therefore, when it came to the tighter greenhouse emission cuts of 60 per cent by 2050 you may not have the capacity to do that?

Mr Young—I think it would be fair to say that the devil would be in the detail of the scheme design in the overall emissions trading scheme. A well-designed scheme with an appropriate market framework that establishes and hits the principles that we have outlined in a constant cost of carbon across the economy, we believe would provide the better opportunity than a mandate in seeing those cost targets hit.

Senator ALLISON—You do not accept that the MRET scheme we currently have has been effective in bringing on very low emission energy sources?

Mr Young—No, we make no comment around the current MRET scheme. We are simply saying that, when you look at an MRET in comparison with the government's key feature of its policy response, you should not do one in isolation of the other because the interaction leads to unintended consequences. I think the strength of Dr Fisher's work and the work of others that I have referred to in my opening comments shows that sometimes when you look at things in isolation or have one scheme in isolation to another program you may in fact get a counterintuitive result. That is what we are trying to alert the committee to, and policymakers generally.

Senator EGGLESTON—I am interested in this issue of combining an emissions trading scheme with a 20 per cent reduction in renewable energy mandate. You said in your submission that the dollar costs and potential loss of jobs, if an ETS was combined with a 20 per cent renewable energy policy, would be quite large. Do you want to elaborate on that for the committee?

Mr Young—I will ask Dr Fisher to address the modelling assumptions and the outputs of which that was one.

Dr Fisher—What effectively happens when you combine these policies is that you are choosing to do the emissions reduction in a more costly way than you could otherwise have done. The consequence is that you drive up the price of, for example, electricity higher than it otherwise would have been and therefore you suppress output in the economy more than you would have otherwise done. Even though you have added extra investment in the renewable energy sector compared to what would have otherwise occurred, you have actually reduced the size of the economy—you have effectively taken investment and jobs from the rest of the economy in total. Effectively, what we are saying here is that the combination of these two policies is more inefficient than what you would have if you hit the same target with a straight emissions trading scheme. So the best thing we could do, basically, is to impose this impact with a direct emissions trading scheme. That does not necessarily mean that you do not need some other policies going along with that. For example, you might need some policy with respect to stimulating investment in low-carbon energy, so you might call upon some sort of technology policy to complement your emissions trading scheme. But you do not want to have a situation where you have two policies rubbing up against each other in a negative way.

Senator EGGLESTON—Would you say that by bringing these changes in now there is the possibility of producing inconvenience and unnecessary cost burdens for business and for corporations such as yours if it turns out that the emissions trading scheme proposes a different kind of renewable energy scheme than is currently provided under MRETs?

Mr Young—As a general comment, in terms of the current debate, I would say there is a range of different areas of government looking at different aspects of the whole response to climate change. We would suggest that they need to be interlinked and comprehensive and streamlined. For example, if we were to talk about national greenhouse energy reporting, which is clearly an important item of any emissions trading scheme, the government and the previous government, for that matter, were trying to streamline greenhouse reporting requirements so as to reduce transactional costs, duplication and so forth. Those kinds of efforts across the

board in terms of the climate change response are important in developing a coherent public policy. So we would agree with you in that sense in principle, Senator.

The other point I would make is that I do think the current government and agencies are doing a very good job in trying to coordinate a number of factors taking place all at the one time. So we have appreciated the opportunity to have access to any of the agencies and policymakers that are speaking about or dealing with these issues, and at the same time there does seem to be some interaction between them as well so that they understand—if I can put it this way—each cog in the wheel and what it is doing. For example, the Wilkins review announced by the finance minister is an attempt to look at non-complementary policies and complementary policies with an ETS. You also have the Garnaut review, which is providing one set of inputs into government. And government has laid out its own timetable in terms of ETS design which will obviously deal with many of the same issues you are dealing in this MRET bill. So whilst there is a lot going on in the space and a lot of work activity, our key point to you and this committee is that as long as they remain coordinated and integrated we would hope for an optimal outcome.

CHAIR—ExxonMobil operates around the world. Are there any other jurisdictions where you operate that have an MRET and an ETS?

Mr Young—I can say that in Europe there is an emissions trading scheme, but I am not aware of a mandatory renewable energy target within Europe—that is beyond the scope of my expertise, so I will take that on notice and come back to you, Senator. But the ETS scheme in Europe has been very instructive to policymakers here on how you design a scheme, what aspects you need to look at and some of the learnings out of that. Certainly as a company that has operated there through our global parent, ExxonMobil Corporation, we have a very good understanding of some of the administrative and regulatory issues that arose in the design and development of that scheme. We have tried to let policymakers here know exactly what some of the pitfalls and some of the strengths were in that effort. We are happy to talk about that in more detail, but we have certainly provided that information. I am not aware in practice, though, of the two types of policies interacting.

Senator WEBBER—It is a personal view rather than necessarily party political, but it is my view that the establishment of the ETS is one of the greatest public policy and intellectual challenges we are going to face for quite some time. I share your concerns therefore about other schemes coming in and the unintended consequences of that. We need to learn from Europe and get it right first time rather than have a system that does not work and then having to fix it. Having said that, has the MRET until now delivered us anything in your view? I accept your concerns about MRET and then the ETS coming in, but have we got anything out of it so far?

Mr Young—It is a broad question in terms of what 'anything' might be defined as. I would say that there is no doubt that the MRET has had an effect in pushing renewables into the energy mix. In our own projections part of what we do regularly is a global energy outlook and we see renewables growing very strongly. We see wind and solar in Australia growing at some very strong growth rates—around seven and eight per cent—and a lot of that growth is being driven by mandated programs such as the MRET and others. In a factual assessment of outcome, that is certainly the case. The broader question that this goes to in terms of the bill here and other matters is the issue of an efficient allocation of resources and how to make sure that markets and market mechanisms best deliver that allocation. We have not done the work to analyse the current interplay so I will restrict my comments, but there has certainly been an increase of renewables in the energy mix and we forecast strong growth as a result of schemes like the MRET in Australia.

Senator WEBBER—Dr Fisher, apart from some unintended consequences that may or may not arise if we change the MRET before the ETS, are there any other schemes we need to be wary of and aware of that may be trying to come into place before we establish the ETS?

Dr Fisher—Generally, we need to be careful of any regulatory arrangements and redesign of regulatory arrangements before we have the full design of the ETS in our heads and implemented. Basically I agree with you that the ETS is going to be one of the most fundamental pieces of economic policy that has happened in this country for a very, very long time and perhaps ever. The way in which other policies interact with it is going to be crucial to its efficiency. I accept that governments always will have other policies. We will not have the perfect policy designed by an economist—and it is probably lucky for the community, potentially, that we do not have such things—and we should accept that governments will want to have a portfolio of policies, but it is very important that that portfolio is as complementary as possible. As an example, from the study we did it appears that the combination of an MRET running to 20 per cent plus an ETS in the first

instance will actually displace gas in favour of coal. This is not a good outcome because coal-fired power is probably twice or more carbon intensive than gas and you do not want that situation occurring. We have to be careful across the board that we do not design policies that are going to have those negative consequences. For my money, I would rather see us put as much effort as possible into getting the emissions trading scheme right and then look at what other complementary policies we need after that, rather than get the process around the other way.

Mr Young—If I could just add to Dr Fisher's comments. There are four areas I suppose that we had described specifically in our submission to Professor Garnaut. One of course was the MRET interaction. The second was in mandating technology, which we think is antithetical to having a market scheme where the carbon price would drive companies to choose the least cost pathway. A third area, which is an ongoing issue that we have discussed at some length and is probably a result of federalism in many ways, is gas in Gippsland, for example, which is taxed at a much higher rate than coal onshore. One falls under a Commonwealth regime and one falls under a state regime. Gas in the Gippsland Basin is taxed at about $1.20 a gigajoule. Coal onshore is taxed at 6c a gigajoule. That is another area that we have highlighted as fiscal interplays around taxation.

The fourth area is that we do have a range of legislation now. There is the Energy Efficiency Opportunities Bill and there are similar things at a state level, such as the Victorian energy efficiency opportunities bill which goes a little bit further in terms of mandating some requirements. We believe that they need to be considered for phase-out for those companies that are involved in an ETS post that date. We have said that for two reasons. One is that carbon price will provide a liability or signal to those companies that have not done so to undertake those works. But the second is that, to be frank, companies like ExxonMobil since 1999 have reduced CO2 by about eight billion—I will check the number and get back to you to be sure, but it is the equivalent of about 1.5 million cars off the road in terms of energy efficiency opportunity improvements. We do that because, firstly, it is good environmental practice but, secondly, it is a commercial driver—saving energy saves costs, and it is important in our business to do that.

Senator BIRMINGHAM—Mr Young, you stated Professor Garnaut's comments and statements in his reports to date regarding the additional costs to the electricity market of the MRETs scheme. My recollection is that he has also stated that in the period to 2020 MRETs will be the main driver of reduction or minimisation of emissions when compared with the ETS and that the effects of the ETS will be longer. Do you concur with that and the research work that has been done in that assessment?

Mr Young—I will let Dr Fisher answer on the detail in terms of his modelling and what that might say, but you are exactly right, that point has been made within Professor Garnaut's discussion papers. It seems a little bit contradictory in the sense of the two items cutting across each other. I think I understand what he is trying to drive at, that the MRET will drive higher renewables in the energy mix. The other question that I suppose he is alluding to is: how efficient is that? That is the key aspect of Dr Fisher's work, that if you have two policies they need to complement each other or else you reduce the efficiency for the same level of abatement. I think Professor Garnaut understands that point, and certainly the Productivity Commission understands that point, but it is part of his key assumptions and some of the targets that he has talked about, so in that sense I believe you are correct. I will ask Brian if he wants to add anything.

Dr Fisher—Because we have not seen any of Professor Garnaut's modelling yet, it is unclear what is finally going to be seen there, but if you take the sort of trajectory that has been discussed then it is hard to see MRET doing all of what is quoted in Canberra as the 'heavy lifting'. It may do all the heavy lifting in the very short term, but it cannot deliver, given the extent of it, the sort of emissions reductions that are required in the longer term. In the work that we have done, for example, just comparing a domestic emissions trading scheme with the emissions trading scheme and MRET to hit the same target—and that is an artificial way of doing this but that is the way we set the study up—you have the interesting situation where the carbon price with the ETS alone reaches $25—which, frankly, I think is a very low number compared with what we are going to see in the future—versus with the ETS plus MRET it is $20. In other words, effectively what the mandated renewable scheme has done is suppress the carbon price below what it otherwise would have been, so you are getting less emissions reduction elsewhere in the economy. So you are actually loading the scheme up to force more adjustment than is necessary onto the electricity sector, and that is inefficient, basically. In his discussion paper on the domestic ETS design, Professor Garnaut makes the point that an MRET is an inefficient way of hitting a target. I think he is correct.

Senator BIRMINGHAM—Thank you for that. This has been touched on briefly this morning. In terms of the structure of the MRET, would the industry feel more comfortable—I am sure they would—if the MRET were a so-called clean energy target encompassing clean gas and clean coal options? If so, would you then believe that the target was worthwhile public policy or are you continuing to stand by the principle of an ETS?

Mr Young—Coming back to some points we made earlier, I think the centrepiece of the response to climate change policy is clearly the ETS, so we would want to see the full design parameters of what the government wants to lay down. Once we have an understanding of the implications of those design parameters, we can assess some of the things you were talking about there in terms of complementary policies. We would always remain cautious, from an ExxonMobil point of view, about assuming that mandates in any specific form are going to be more efficient than a market mechanism—to answer your question at a higher level. But, again, I would come back to the point that we would like to see the detail of how the system will play out.

It is one of the reasons we have talked about learning from the European experience, where they had about five years to prepare. They then had what was basically a three-year trial period or test-out period to learn from exactly what they were doing in Europe and to make adjustments to that going through. I think they are important features that we need to consider in terms of the development of ETS policy here. The other potential policy options—such as MRETs and other targets, mandated technology, fiscal levers and so forth—need to be a secondary issue until we have got that bedded down and understand how that is working, and working in an optimal manner.

Senator BIRMINGHAM—How distortionary do you think the MRET will be—as against a clean energy target—within the electricity sector per se?

Mr Young—I do not believe I am properly qualified to comment on that, because we are not an electricity company per se, but again we would be very cautious about the possibility of unintended consequences from setting those kinds of targets.

Senator ALLISON—Are ExxonMobil diversifying into any renewable energy projects in the same way that BP is?

Mr Young—No, not at the moment. We certainly do not have renewable projects in the same way that I think you are referring to. Our focus has really been on research and development. We fund a range of programs in what I would call ‘renewable research’. One in particular is our Global Climate and Energy Project. I should not say ‘our’; it is certainly a program we fund, but Stanford University runs it globally. That looks at everything from solar to carbon capture and storage. In fact, the University of New South Wales has won grants from that program for research into solar. So our focus is very much more on funding breakthrough technology which will help manage the risk posed by rising emissions than on entering into it as a commercial exercise.

CHAIR—Thank you for your evidence.

[11.03 am]

HAENKE, Mr Peter, Manager, Carbon Projects, Origin Energy

CHAIR—I welcome our next witness, from Origin Energy. Thank you for your submission. I understand that you are here to speak about the National Market Driven Energy Efficiency Target Bill 2007 [2008]. If you wish, make a brief opening statement.

Mr Haenke—Thank you. I would like to make some opening comments if I may. First of all, I would like to thank senators and committee members for the opportunity to present Origin Energy's views on the proposed National Market Driven Energy Efficiency Target Bill. Origin has demonstrated a commitment to actively participating in the climate change policy debate, and we are pleased to continue that tradition by also contributing to the discussion around energy efficiency.

Origin is fully supportive of the proposition that complementary measures to emissions trading will be needed to achieve substantial cuts in greenhouse gas emissions. As you are well aware, the current policy environment surrounding climate change is busy and fluid. In this context, we consider that Senator Allison's bill has made a timely contribution to the policy debate, but we feel that further consideration of the numerous processes underway, particularly the development of an emissions trading scheme, needs to occur prior to introduction of a bill such as this.

In our view, a national emissions trading scheme forms the central mechanism for achieving abatement targets, with complementary measures, including those addressing low-emission technologies and energy efficiency, playing important supporting roles. We believe the first task, therefore, is to urgently develop a national energy efficiency strategy that fits within the overarching climate change context, rather than developing ad hoc or isolated policy measures.

In our view, such a strategy should incorporate the following five elements. Firstly, it should be based on clear policy objectives incorporating quantifiable targets based on an informed view of the possible gains that can be made and the likely costs. Secondly, it should be developed at the national level, ideally by COAG, with that body's capacity to deliver an outcome of certainty to industry participants, strong funding and resourcing, and a commitment to remove duplication and inconsistency wherever possible. Thirdly, it should consider the broader regulatory context, including both the retail and the network segments of the energy industry—for example, the effects of retail price regulation, network incentives for supply side and demand side activity, and regulations and policy settings outside the energy industry. For example, in the commercial building sector, tax depreciation rates are a key factor that influence the rate at which building owners are likely to upgrade their assets.

Fourthly, it should be fit for purpose. In other words, it is almost certain that there will not be a single policy mechanism that can single-handedly effectively overcome all barriers to energy efficiency. The range of measures that will be needed should be developed in a well-considered and coordinated fashion wherever possible. For example, if the government sets a regulatory requirement to phase out electric hot water systems, this would impose a more stringent baseline for activities under an energy efficiency target scheme which would presumably impact on the costs associated with compliance. Fifthly, consolidation: Origin is of the view that if there is an opportunity to reduce duplication, improve harmonisation or remove unnecessary measures then this should be taken as it will lead to improved productivity gains. We note that the streamlining review being conducted by Roger Wilkins is intended to achieve this outcome and we support that initiative.

In summary, whilst Origin is supportive of initiatives to improve energy efficiency, a number of complex issues would need to be addressed before we could support a specific proposal. With that caveat in mind, we would like to offer the following thoughts on the role that an energy efficiency target scheme could play as part of a broader energy efficiency strategy. We also offer some comments in relation to the issue of how such a scheme might interact with an emissions trading scheme, as we see this as a key challenge for policy makers. Firstly, an energy efficiency target scheme should be considered as one of the options under a comprehensive national energy efficiency strategy, but it should not be the preferred option simply by default. Market based schemes such as a national energy efficiency target could offer some attractive features but would also tend to present more complex design and operation challenges. For this reason, policymakers should carefully consider the pros and cons of a market based scheme as well as alternative policy options before settling on the preferred option.

Secondly, a single tradeable national energy efficiency target scheme would be far preferable to a collection of incompatible state based schemes. We note that the energy industry will from next year be contending with three similar but quite incompatible energy efficiency schemes—namely, the New South Wales Greenhouse Gas Abatement scheme, the Victorian Energy Efficiency Target scheme and the South Australian residential energy efficiency scheme. This tends to reduce the opportunity to source low-cost options wherever they may exist and thereby increases compliance costs and hence ultimately results in higher costs for consumers. If a national target scheme is deemed appropriate, Origin would see no rationale to maintain separate markets, and the developers of a national scheme could draw upon experience gained by the states as well as international experience.

Finally, an energy efficiency target scheme should be designed to complement emissions trading in a way that does not undermine the efficiency or efficacy of either scheme. This could be a difficult outcome to achieve in practice and could entail some complex trade-offs. Origin strongly supports the introduction of a national emissions trading scheme and believes it is important to understand the possible interactions between energy efficiency measures and an emissions trading scheme. These may include a shift in capital expenditure to consumers in return for reduced energy costs over the life of the energy efficiency initiative and a potential softening in carbon price, assuming that energy efficiency delivers a given level of abatement at a lower cost than supply side measures. While attractive from a cost reduction perspective, this would have the effect of reducing the incentive to invest in low-emission-generation technologies. Given what is likely to be an urgent need to stimulate investment in such technologies, Origin contends this would pose some risk to achieving significant emission cuts.

There would be potential for double counting if the white certificates created on the demand side could be bought by a liable party under an emissions-trading scheme, such as a power station, and used towards compliance, and there would be potential complications if Australia wished to engage in activities using the joint implementation mechanism of the Kyoto protocol. An Australian offset regime should be consistent with the JI guidelines relating to issues such as baseline setting, monitoring, additionality, project documentation, crediting periods, validation and verification. Without having examined these issues in detail, Origin suspects that it may be difficult to develop an appropriate demand-side abatement provision under emissions trading in a way that satisfies these requirements.

In conclusion, therefore, Origin strongly supports options for energy efficiency initiatives being considered in the context of the emissions-trading design process and an overarching energy efficiency strategy rather than having measures introduced on an ad hoc basis.

CHAIR—Thank you. You have pointed out a lot of complexities involved in deciding which scheme would be appropriate. What about the workability of this particular bill? Do you think that it allows enough flexibility for the scheme to work?

Mr Haenke—I guess our concern is that we are not sure how it fits together in the broader context of an energy efficiency strategy. So we are not opposed to a market driven scheme per se, but we would be concerned to see that it is thought through in the context of other policy measures so that they fit together in a cohesive way and do not lead to unintended consequences. So it is not that we have a specific issue with the bill as proposed; we are not seeing that it fits as part of an integrated strategy at the moment.

CHAIR—Where do you see the costs of this being borne—by the consumer or by companies involved? How does Origin see this operating, particularly in the start-up phase?

Mr Haenke—I guess Origin's position is generally that market driven mechanisms like this are most effective when the costs are reflected through to the end consumer. That is part of providing a cost signal to change behaviour. Inevitably there is a limit to how much cost can be passed through the consumer in a competitive market and there are inevitably some administration costs borne by the retailer in setting up the systems and frameworks to deal with the various measures. So what I am saying is that it is not 100 per cent passed through.

CHAIR—Origin Energy has a renewable energy section. How does that rely on any subsidies? How does the cost structure of that operate within Origin Energy?

Mr Haenke—Origin operates across all of the various aspects of the carbon markets. We are liable parties under both the current mandatory renewable energy target as well numerous other climate change, greenhouse related programs such as the New South Wales scheme and various others. So we operate across all of those schemes. To take renewable energy, for example, we are significant market players for renewable energy

certificates; and we are also building renewable energy generation stations, wind farms, which are backed by the income from renewable energy certificates. So it is an important part of developments for renewable energy.

CHAIR—Is that section of the company profitable with the renewable energy certificates?

Mr Haenke—Everything that Origin does would have a commercial return, yes.

CHAIR—Without those incentives would it be profitable?

Mr Haenke—No; it is well understood that renewable energy is more costly than conventional or coal-fired or even gas-fired power in Australia at the moment. So it does rely on the income from renewable energy certificates to make it competitive.

CHAIR—When considering energy efficiency, of course, if there is a response there, what you are saying is that some of the market for the carbon trading is softened, so that makes it more difficult to develop other schemes, and hence the tension between the two.

Mr Haenke—That is one of the potential outcomes that could occur. It depends how an energy efficiency trading scheme, if there were to be one, is introduced and what interaction there is with renewable schemes and with emissions trading. But in principle one could anticipate that there might be a softening in a carbon price as a result of energy efficiency schemes being introduced. The point we are making is simply that that may introduce additional risk to the introduction of low-emission generation technologies. We see that there is going to be a need both for generation technologies and renewable energy in the suite of mixes to combat climate change.

Senator ALLISON—Mr Haenke, could you expand on why you think there are such complexities here? There has been an assumption that MRET would sit alongside an emissions-trading scheme, whatever its shape, although the previous witnesses disagree with that. It has been understood by this government that MRET will continue. Sure, efficiency trading will be a bit more complex than renewable energy trading, but I am a bit puzzled as to why you think that efficiency trading could 'undermine', I think you say, the effectiveness or the efficiency of either scheme. Why do you say so? Can you expand a bit on that?

Mr Haenke—Sure. The intent of an energy efficiency scheme is obviously to encourage energy efficiency in the market. The complexity arises in the way that is incorporated or interacts with an emissions-trading scheme or even a renewable energy scheme.

Senator ALLISON—But why would it interact at all, except insofar as the targets that are set for either scheme?

Mr Haenke—It could presumably interact with an emissions-trading scheme.

Senator ALLISON—In the targets, yes—in what other way?

Mr Haenke—Through the target, if what we are trying to achieve is a certain quantum reduction in emissions, which is what the emissions-trading scheme is attempting to achieve.

Senator ALLISON—So you have an efficiency trading scheme which has a target; that then becomes part of the target of the overall emissions-trading scheme—what is problematic about that?

Mr Haenke—It depends how that gets built into the target. Do you decide up-front that we are going to quarantine a certain number of emissions-trading permits for energy efficiency or does it become—

Senator ALLISON—In this respect is this different from MRET?

Mr Haenke—Yes.

Senator ALLISON—How?

Mr Haenke—MRET does not get built into the emissions-trading scheme like that. It is a separate scheme. MRET is a totally separate measure. With energy efficiency there is a potential for double counting. If you implement an energy efficiency measure, you have reduced your consumption of energy, which means that somewhere a generator has produced less energy. So if you produce a certificate for that in one place for having implemented an energy efficiency measure and somewhere else you have a generator that has produced less energy, they require one less permit, so you have a potential double-count issue. So you do need to think about how you address that double-count issue. That is one example of some of the complexity that that introduces. Does that make sense?

Senator ALLISON—It does not sound very complex to me, that is all.

Mr Haenke—I think it can be, because it is a matter of how you go about addressing that. You have options as to whether you deal with that by trying to set aside some permits out of the emissions-trading cap specifically for energy efficiency, then that requires policy makers to make a decision on what that number is going to look like. There are implications for getting that number wrong.

This is an issue that the former Emissions Trading Taskforce looked at and it was one of the reasons that they moved away from recommending energy efficiency as a part of an emissions-trading scheme. I am not necessarily saying that I think that is the only outcome. There may well be ways of addressing it. I am just saying I think that issue needs to be thought through.

Senator ALLISON—I think we all agree we need wide-ranging measures to achieve the 30 per cent that appears to be possible in electricity reduction through energy efficiency. I think the UK have six or so major policy areas that they are working within. What do you think is the most important policy measure to introduce to achieve this 30 per cent efficiency?

Mr Haenke—I would see a range of measures. As you have indicated, other jurisdictions have introduced a range of measures. Indeed, we already do have a range of measures.

Senator ALLISON—But we are very, very slow in making progress on that, and they are obviously not working.

Mr Haenke—I am not suggesting what we have got is necessarily sufficient. I am indicating—

Senator ALLISON—Can I put the question another way. It seems to me that a trading system for energy efficiency has got the greatest capacity to make progress and to move efficiency along. I agree we need a suite—standards setting, all sorts of things—but what, in your view, is the single most important measure for delivering on those savings?

Mr Haenke—I do not know that I would like to suggest a particular measure; I do not think I am qualified to give that view. I think I can say that different measures provide different quantums of abatement and at different cost-effectiveness levels. I am not necessarily convinced that a trading scheme is the primary mechanism to deliver energy efficiency outcomes.

Senator ALLISON—What leads you to that conviction?

Mr Haenke—An absence of evidence that it is necessarily will. I have seen evidence that regulated outcomes, for example, can lead to cost-effective abatement.

Senator ALLISON—Such as what?

Mr Haenke—Minimum energy performance standards is a classic example, which we already have.

Senator ALLISON—With respect, that does not seem to have worked to deliver us much by way of efficiency gains.

Mr Haenke—I think it has. Certainly Australia's energy consumption is rising, and that is what we are trying to address here. But, if we are looking at specific policy measures, as one particular example the MEPS program has removed very poor efficiency equipment and appliances from the market in a cost-effective manner. I am not suggesting that is the panacea and I am not suggesting that is the only response, but there are measures out there that can address energy efficiency.

Senator ALLISON—But couldn't efficiency trading build on those MEPS measures by rewarding those who take the steps to produce goods which are more energy efficient?

Mr Haenke—Yes, that is one example of a measure that would be appropriate under an energy efficiency trading scheme—to reward those with a higher efficiency rating. That is what you suggesting?

Senator ALLISON—That is what the bill is all about.

Mr Haenke—Yes. There is no doubt that that would be one way of rewarding that kind of activity. But, again, it comes back to how the different measures fit together, and that is the reason we feel it needs be put together as part of a comprehensive strategy. For example, if we were to introduce that measure for, say, a five- or six- or seven-star appliance becoming eligible for certificates above and beyond whatever the minimum is, and if at some other point that minimum appropriate level is changed through another policy, then that obviously impacts on the energy efficiency measure, the energy efficiency trading. If the minimum is three stars and then tomorrow it becomes four stars, that changes what can be gained. So it is a matter of thinking about those interactions so that we have some certainty and understanding about where those different

policy measures are going and how they interact with one another and also with measures that the individual states may be implementing.

Senator ALLISON—The first witness today made the point that emissions trading, if it is up and running by 2010, is still a long way off in terms of the possibility of energy efficiency measures being taken much sooner, because there will be a transition period. Even if we are actually trading by 2010, which seems unlikely, there will be a phase-in—a transition stage—and so we could be looking at another five years before it produces measures which could assist with energy efficiency. Do you not see an argument for moving to an energy efficiency trading scheme like this sooner, so that you can get some runs on the board, and then allowing it to merge into an emissions-trading scheme?

Mr Haenke—I would be wary of heading down that path, for the reasons that I have indicated—that we see some potential complexity in the interaction between emissions trading and energy efficiency trading. To move to introduce energy efficiency trading ahead of emissions trading potentially locks us into a particular path that may then cause difficulty in an emissions-trading world. I certainly would support measures to address and improve energy efficiency as quickly as possible. The evidence is overwhelming that energy efficiency is a good and cost-effective thing to do to address climate change, and the sooner it happens the better from a cost-effectiveness perspective. Rushing into an energy efficiency trading scheme ahead of thinking through how that interacts with an emissions-trading scheme may cause some problems.

Senator BIRMINGHAM—Thank you for your evidence today. Can you give us a very brief analysis of your understanding of how the proposed scheme in the legislation before us compares with the operations of those existing ones in Victoria and New South Wales that you have referred to and what some of the benefits and negatives associated with them are?

Mr Haenke—Sure. My understanding of the bill is that it would introduce a target, initially one per cent and then two per cent of total sales, which would have to be met through delivery of certificates. In that respect, it is quite similar to the intent of both the New South Wales and the Victorian schemes. New South Wales is a little bit more complex in determining the target, and so in that respect this bill is an improvement over that because it is a clearer, simpler targeting process and takes away some of the uncertainty that sits around the New South Wales scheme in that respect. In terms of developing the actual projects to deliver certificates, my understanding of the bill—and please correct me where I am wrong—is that it is quite similar in intent to both the New South Wales and the Victorian schemes. The difference, I suppose, between those schemes is in the detail. Obviously the detail would still need to be thrashed out for this bill also so it is in the regulations and the rules that sit around it rather than in the higher-level act.

Senator ALLISON—Isn't the Victorian scheme just residential?

Mr Haenke—At the moment, yes. That is right. The Victorian scheme is focused on residential only. New South Wales is across the board. The Victorian scheme focuses on gas as well as electricity, whereas the New South Wales scheme is electricity only.

Senator BIRMINGHAM—Have you had discussions with any of the state governments about the desirability of a uniform national approach, which you have made clear in your submission and your comments today, rather than obviously the rather piecemeal approach that you are getting at present?

Mr Haenke—I suspect we have. I have to defer to a colleague of mine who would have been involved in those discussions; he is away on leave at the moment, which is the reason I am here rather than him. So I am guessing we have, but I could not tell you the detail of that.

Senator BIRMINGHAM—Do you have any thoughts on the implementation and operation costs of such an energy efficiency scheme as against the emissions trading scheme and how it will impact on a business such as yours and, more significantly, how it will impact through to the consumer? What would be the comparative costs of two such schemes?

Mr Haenke—Again, a lot of it comes down to the detail of how it is implemented and how you account for specific savings that may be implemented. There can be significant transaction costs involved in identifying, monitoring and verifying emissions savings or they can be significantly reduced, depending on how the scheme is designed. For example, there is the level of deeming that might be allowed for measures that are implemented, along with the level of standardisation of savings and other factors that can be used. The New South Wales scheme is an example of that, where there are some published numbers for specific types of activities. In the residential sphere, in particular, there is the implementation of compact fluorescent lighting, low-flow showers—those kinds of things. There are published factors that say that for each one of those

installations you can get X tonnes of abatement credited for that activity. So that simplifies the process significantly. But that is obviously a level of detail about how you implement the scheme. Absent those things, the administrative costs can be quite high if you have to define those things on a case by case basis.

Senator BIRMINGHAM—You are saying the costs of either scheme could be quite high? You feel that the proposed energy efficiency scheme would have far higher administrative costs and complexities compared to an emissions trading scheme?

Mr Haenke—They are fundamentally different. An emissions trading scheme is going to reach right across every aspect of the business—and the economy, for that matter. So there are many aspects of the business that need to be thought through with respect to an emissions trading scheme. I do not think I could give you an off the top of the head response on what the cost of that to the business is going to be. An energy efficiency scheme is a more localised cost for the business, and we have some experience in dealing with that from the New South Wales scheme as well as other schemes such as the Queensland 13 per cent electricity scheme and the MRETs scheme and so on. That is really an administrative cost in getting our systems together so that we can track our liability, so that we can track whatever projects we might be implementing and so that we can track the trading process for buying and selling of certificates and so on.

Senator BIRMINGHAM—Finally, and moving away from the energy efficiency scheme into the renewable energy generation issues, as an energy retailer and generator, firstly, does Origin agree with the theories or beliefs that the MRETs corrupt or potentially corrupt the effective operation of a national emissions trading scheme? Secondly, does Origin believe that, in terms of the most effective way to reduce your emissions outputs, you would prefer to see a clean energy target rather than renewable energy targets, or do you have a preference for the opposite and the proposed renewable energy target system?

Mr Haenke—I probably should preface my comments by saying I am here to talk specifically about the energy efficiency bill rather than the renewable energy bill. Origin is on record as supporting both emissions trading and a renewable energy target. We see that as an appropriate mechanism to support the development of the renewable industry, at least in the interim term, until an emissions trading market is fully up and running and carbon is being properly priced into future decision making.

Senator McEWEN—You quite rightly point out that this bill deals with electricity, but Origin is of course a gas retailer and producer. Are the answers to your questions different for gas and electricity?

Mr Haenke—Sorry, which specific questions?

Senator McEWEN—Are there any further comments you want to make about the impact of this bill being different for gas and for electricity?

Mr Haenke—No. I think the main point would just be that you should think through what exactly the intent of the policy measure is. Once you start going across different energy sources you have to think about whether you are chasing energy efficiency or you are chasing greenhouse gas reductions, because they are not necessarily the same thing. In some cases they can actually be contrary—when you are switching fuel types you can go to a lower efficiency appliance but get less greenhouse emissions. In that regard, thinking through what the policy intent is is important.

Senator WEBBER—I did have something else I wanted to ask, but I would like you to expand a bit more on the fact that there can be two different objectives, greenhouse gas reduction versus energy efficiency, and the impact that is going to have.

Mr Haenke—Clearly they are objectives and both of them are good objectives in their own right, but you need to decide which is the primary objective for any particular policy, obviously. To give an example of that, you may have an option to change your heater at home from a low-efficiency electric heater to a high-efficiency electric heater or to a low-efficiency gas heater. Without doing some numbers, you would not know straight away whether the low-efficiency gas heater was better or worse than the high-efficiency electric heater just because gas is a lower greenhouse intensity fuel source than electricity.

Senator WEBBER—Which makes me even more aware about the complexities of putting in place a regime like this before we actually have an ETS. They can be two competing and conflicting objectives rather than an enhanced uniform approach.

Mr Haenke—As a further example of that, in the commercial sphere, you might take the opportunity to implement a cogeneration system on site for power and heating for a building, which might give that building a lower greenhouse signature than that of a 100 per cent electricity driven building. But the measured energy

efficiency of that building will be less than that of an electric building because converting a fuel to electricity is happening off site in a power station for the electric building whereas it is happening on site for this building. So, measuring the efficiency of that building, you have just decreased the efficiency, but you have also decreased its greenhouse signature. So it is important to think about how that is working.

Senator McEWEN—As a retailer I presume you give advice to organisations, companies or domestic consumers about the best way to go with regard to electricity versus gas and the future of either an ETS or of energy efficiency schemes that are coming along. What advice is Origin giving to people at the moment who come to you and say, 'I'm not sure whether to power this building with electricity, gas or both'?

Mr Haenke—It is always very much on a case-by-case basis. If you are talking at a building level, there are lots of commercial decisions in there and it is impossible to give a one-size-fits-all answer. It will depend on the nature of the building, its requirements, and other equipment specifications and so on. But, broadly speaking, we would be advising to work towards cost-effective solutions with a view to greenhouse signature or footprint. We also provide a range of products for consumers to choose from, such as green power and so-called green gas, so that, even using the equipment that they need to use, they can still reduce their greenhouse footprint from a supply-side perspective.

Senator BIRMINGHAM—In response to Senator Allison, you gave the example of where double counting could exist between an energy efficiency scheme and an emissions trading scheme. In the end, if credits are being given under an energy efficiency scheme for reduced usage of energy and benefit is being accrued under an emissions trading scheme for reduced generation of electricity as a result of the outputs, can you give me an example of where double counting wouldn't exist. Wouldn't almost everything be double counted if the two schemes were operating side by side?

Mr Haenke—When you are talking about electricity, yes. If you are talking about gas then no, obviously. Within the electricity sector, it is, because you are talking about two ends of the same chain—generation and end use.

Senator WEBBER—I want to go back to the discussion we were having earlier. We were discussing establishing the ETS and the way that is going to impact right across the economy in terms of every aspect of the economy making some kind of contribution—be it through taxation, reform or whatever—to address greenhouse gas emissions. There has also been some discussion about how before the ETS comes in, but that could be two years away. Would it be fair to say that there is already a discussion and advice happening within business to prepare for the establishment of an ETS? It is not as if we are just stuck in a time warp and are static and that nothing is going to change for two years.

Mr Haenke—I can only speak for Origin, but we are certainly very aware of the introduction of an emissions trading scheme and are actively working towards preparing for that.

CHAIR—I would like to go back to the state systems again. A lot of what drove the existing state schemes—or the proposed state schemes—was impatience with progress about greenhouse gases. Once the national system which has been foreshadowed is in place, would you expect that those state schemes would fold into the national scheme?

Mr Haenke—Our preferences are for harmonisation and reduction of duplication wherever possible. We are currently operating under a multitude of schemes and systems, and that does add complexity and cost to the business. In some cases, it also reduces the effectiveness of those schemes, where they interact or don't interact effectively with one another.

CHAIR—When you say 'reduces effectiveness', is that because you operate nationally and it is difficult to accommodate the schemes? Is it the company operation rather than the schemes as such?

Mr Haenke—It can be both. Certainly, from the company perspective, operating with different rules in different jurisdictions is always a complexity. But it can also be that the way rules are established in one jurisdiction might interfere with or impede the operation of another scheme. For example, if we go back to state based renewable energy targets versus the federal renewable energy target, there is an interaction there between projects that might be available for a state based scheme but might also be getting drawn away into meeting an obligation under a state based scheme. So there is an interaction there, and it does not necessarily lead to the most efficient use of the resources across the country.

Senator ALLISON—I have a last question—out of curiosity, really, more than anything. You say you are the leading GreenPower provider. Is that in Victoria or in Australia?

Mr Haenke—In Australia.

Senator ALLISON—What percentage of total sales are GreenPower sales?

Mr Haenke—I probably should know that. Can I take that on notice and come back to you.

Senator ALLISON—That would be excellent. Thanks.

CHAIR—Thank you, Mr Haenke.

Mr Haenke—Thank you.

[11.46 am]

O'HEHIR, Ms Fiona Marie, Chief Executive Officer, Greenbank Australia Pty Ltd

WAYLAND, Mr John, Director, Greenbank Australia Pty Ltd

CHAIR—I welcome the witnesses from Greenbank Australia Pty Ltd. Thank you for your submission. I understand you are here to speak about the Renewable Energy Legislation Amendment (Renewable Power Percentage) Bill 2008. I invite you to make a brief opening statement.

Ms O'Hehir—Thank you. John Wayland is a director of Greenbank, and he was the chairman of InterData, which wrote this *Environment Handbook* some 20 years ago, in 1991. My background is in large solar and power electronics, and I contributed to this edition of the *Australian photovoltaic industry roadmap* back in 2004. Greenbank Australia is the largest independent carbon and REC trader in Australia. We have a significant market share, and we are not attached to or aligned with any of the manufacturers. All we do is aggregate, register and trade in environmental products. We do not provide any other services other than some renewable energy stuff.

Australia must not repeat the mistakes that have been made in Europe. We are here to support the bill because renewable energy and clean energy will stall if there is a hiatus. Stalling will drive away serious investment. Capital flows will stall. Institutional funding will look at us as if we are not a serious industry. We need serious support and governance to support all these measures. Nothing drives industry away faster than money and risk.

To meet our emissions reduction requirements under the Kyoto protocol, we need strong, evidence based policy followed by good governance. MRET delivered that successful policy, delivering the target in 2006. No new large REC-creating projects have been deployed since then, and adding another two-year gap will kill the REC market, which will have a flow-on effect through the whole of the renewable and clean energy industry.

We have three companies which will be affected. I would like to talk about those in a micro sense, because I am not presenting the macro picture here. Greenbank, as I said, is the largest aggregator and funder of RECs under the MRET target and the GGAS scheme. If the REC market falls, as it did down to $14 in 2006, there is a point where it is not worth creating these products. You have overhead commitments, aggregation costs and administration costs. So if the price of the RECs falls away the whole thing will just come down to naught. RECS behave like shares on the stock exchange, and they need similar governance and institutional support to give market confidence. I met with three members of ASIC on Friday to explain how the REC market and these other white certificate schemes work. Unfortunately, they were ignorant of the whole policy and the framework under which it works. I would ask that we have all-of-government policy and outcomes so that the state, federal and local governments can look at these policies and have a strong influence over the outcomes.

Our other company is Australian Environmental Rebates. Our mission is to provide the finance for the gap funding that arises during the time taken to process the rebates under the PVRP and RRPGP schemes under the MRET. These programs are currently oversubscribed and need to be topped up now if industry is to continue to grow. We need to grow to give economies of scale to provide stability and market signals, particularly for the emerging and the innovating technologies. We need early action on emission reductions and drivers for social change. Legislating these programs would provide some level of regulation and surety, allowing us to have binding agreements with both the installers and the banks.

Lastly, Renewable Energy Services is my consulting company and I am going to run a program called Removing the Impediments to Grid Connect. This project is funded through the department of the environment and the Clean Energy Council. Work has begun on that in the expectation that targets will be placed in early succession. The aim of the project is to streamline the electricity connection processes, working towards a national standard; developing a consensus approach to metering and billing requirements; reducing and simplifying the connection agreements; and negotiating the removal of clause 4.2(a), which is in the attached documents.

All three companies are directly affected by the introduction of the next round of targets. A two-year interruption will cause the clean energy industry to slow investment across all sectors. They will have to put off newly employed staff and will lose any momentum gained due to the stop-start nature of programs and targets. Government will be damaging the very sector that it wants to cultivate and will have to resuscitate the industry when it works out its final policy positions. The renewable energy and clean energy industry is geared up and ready to move now.

CHAIR—You referred to the failure of the European system. Could you elaborate on what way you think it has failed?

Ms O'Hehir—That was in the carbon-trading model where they changed some of their policies under the emissions-trading scheme and the price fell, at the end of 2006, from $30 to—

Mr Wayland—Zero. It dropped off the graph.

CHAIR—What policy settings were changed to achieve that result?

Ms O'Hehir—I think part of it was through the free allocations and the other mechanisms within the emissions-trading scheme in Europe—fiddling with the rules, basically.

CHAIR—Hence you were saying that it operates a bit like a stock market—

Ms O'Hehir—Absolutely.

CHAIR—and you see a danger of something similar happening here in Australia if momentum is not maintained.

Ms O'Hehir—Absolutely. The RECs are a commodity. Greenbank aggregates them from all the smaller players—from Mr and Mrs Jones. When we have a parcel large enough to make a trade, we go to market. We have a broker who finds us someone who has a liability under the scheme and we do a trade at, say, 5,000 RECs. That price is not governed; it is not governed like the stock exchange is.

CHAIR—How would you see an emissions trading scheme impacting on that arrangement?

Mr Wayland—We have spoken and written to the minister for finance, Lindsay Tanner, and we have said to him that our position—that is, Greenbank's position—is that you must bring in a program that is run by Treasury. This is not about environmental issues once it gets to a certain point. It must then go to Treasury. You must have a regulator like ATSIC; you must have a regulator like the stock exchange; you must have registered brokers, the same as you have with stock markets. All of those brokers who are trading must get off the kitchen table and have a minimum paid-up capital of $10 million. If you go to the Chicago exchange and say, 'We want to buy and sell,' they say, 'Good. Show us your balance sheet.'

The moment you have kitchen table traders, you have instability in the market, because they can rush out, buy a whole pile of wrecks and fall over tomorrow. So you have got to have it regulated like the stock exchange. That is what we said to him and that is what we say to you too. We have been to all levels of the National Stock Exchange. We have been to the National Stock Exchange down here, which used to be Bendigo Bank, and said, 'Please—what Greenbank do now is buy, aggregate and sell. In that transaction there is a stock exchange role. We will give it to you. We will pay money for it,' because it must become transparent in the long route. We must have brokers, like stockbrokers, who are properly funded and properly regulated.

The REC must become an APRA approved document. We have been to APRA. I do not want to have any regulator tap me on the shoulder in three years, three months or three days time and say: 'Excuse me, you are trading in a financial instrument that is regulated. You can go to jail.' I am a chartered accountant of a number of years standing. I am here to uphold laws and not work ways around them. You have got to have an APRA approved document. APRA sat there and looked and said, 'A what? A REC?' Fiona spent two hours in front of ATSIC—

Ms O'Hehir—An hour and a half—

Mr Wayland—because it is called Greenbank, and in fact this is a bank. But we have sat in front of ATSIC and said, 'We want to use the word "bank",' to which ATSIC have said: 'Take me through this again very slowly. We do not understand.' So we must have that regulatory exercise well set out. Going back to your question, 'What do we do?', we say we support carrots and sticks; we support incentives and targets; we suggest that nothing should be given away, as does Garnaut, who said, 'You have got to have auction systems.' Good—there is certainty in the market. We say: when you then go through the platforms, give it a base. Do not leave it on the kitchen table. Do not leave it for fly-by-nighters to get into the trades.

CHAIR—Because what you are doing is accumulating credits, which are obviously a financial entity, and so you are holding them on behalf of other people. So you are saying it needs regulation.

Ms O'Hehir—Greenbank actually purchases them.

CHAIR—So you purchase them directly?

Ms O'Hehir—Yes.

CHAIR—So you do not hold them in trust; you purchase them first up?

Ms O'Hehir—Absolutely.

CHAIR—So it is your company then that is responsible?

Ms O'Hehir—It becomes the owner of the product. Whether it is a white certificate scheme or a green certificate scheme or even with carbon trading—a black certificate scheme—there is a very grey area as you go across. We believe that in the future in emissions trading you will be able to bank them on behalf of other people. That is not what we are doing currently, but you can see that will become the next—

CHAIR—It will become—

Ms O'Hehir—A financial instrument.

CHAIR—There is nothing under the current regulation—or there is little regulation, you are saying?

Ms O'Hehir—Exactly.

CHAIR—No regulation?

Ms O'Hehir—No regulation.

CHAIR—Perhaps we will go to other questions. Senator Bushby?

Senator BUSHBY—Picking up a little bit from what the chair was asking you, you were commenting on the need to get this right and looking at what has happened in Europe. There are a lot of lessons to be learned. As I understand it, the Garnaut inquiry is looking at the overall issue of emissions-trading schemes. We have heard this morning from a number of other witnesses that it would be preferable to find out what Garnaut has to say and what they come up with, having looked at the European experience and hopefully having learned from those lessons, before we actually introduce a bill like this. What is your comment on that conjecture by the previous witnesses—that basically we should wait and see what the ETS is as proposed before we constrain it by putting in bills like this?

Ms O'Hehir—The renewable energy target?

Senator BUSHBY—Yes.

Ms O'Hehir—There are two issues there. Working back from a target of, say, a reduction of 60 per cent by 2050, we cannot rely on one energy mix, as I think everybody agrees. This is how I perceive it to work. Once emissions trading comes in, the price of power will rise. We need the renewable energy target now to foster and grow our renewable energy industry so that, when we get to 2020, it will be running in parallel with the emissions trading scheme. By then, hopefully, clean coal—truly clean, if there is such a thing—and renewable and clean energy will be on a par and so will be able to compete in the marketplace. But currently with renewable energy—with the installing of the product, with the question of what is going to be the next new energy source, with biomass—there are huge numbers of innovating technologies to be developed because we cannot just rely on one source. That is why this bill is so important. If we do not get the support going forward, we cannot help to meet our commitments in 2020. That is just a short-term plan; that is not a long-term plan. I think Exxon were saying it would add $1.8 billion to the overall bill of Australia by 2020. It is not that much.

Senator BUSHBY—I think their point was that it would be $1.8 billion if you combined the ETS and the MRET—it is not so much the overall cost but the additional cost of having the two running at the same time.

Ms O'Hehir—I would say that, in the scheme of things, to get our emissions down and to meet our targets we need early action and behavioural change. Unless we convince the minds and hearts of the Australian people that they have to change their behaviour, we will not do it.

Senator BUSHBY—I will come back to the question that I started with. I accept what you are saying there; you are saying we need to get it right. What I am particularly concerned about is whether, if Garnaut comes up with a proposal that takes into account all the problems that were experienced in Europe and overcomes those with a strategic approach, putting a bill like this in place now may upset the apple cart, so to speak, of what Garnaut is trying to achieve. I just wanted your thoughts on whether it might interfere with the outcomes he puts forward having learnt from the lessons of Europe.

Ms O'Hehir—Having an emissions trading scheme is not going to support the industry. In 2010, there will have been a slice of four years where there has been no extra action in the renewable energy sector. They do not actually fit together. Emissions trading does not automatically help the renewable energy industry develop and meet the power mix required in 2020 to go forward.

Senator ALLISON—You say the RECs fell in 2006 to $14 each. What are they now?

Ms O'Hehir—They are around $48 or $50 depending on the size of the parcel. It is $52 for a large parcel going to market.

Senator ALLISON—How do you explain that? Is it because now projects are not proceeding in the way that they would have been had the target not been met?

Ms O'Hehir—What is driving the market now is things like this, like the renewable energy bill being proposed with targets for 2010 and the level of uncertainty in the market. I actually think the people who are going to have the liability if the bill goes through are aggregating now, purchasing now, in advance of whatever the outcome is.

Senator ALLISON—So the government's decision to proceed with extending the target—

Ms O'Hehir—Is currently driving the market.

Senator ALLISON—is driving the market for RECs, not driving development yet?

Ms O'Hehir—No, it is not driving new projects, because a lot of those RECs are coming out of the solar water-heating industry, which does not give any impetus to the PV industry, the photovoltaic industry. It is a bit of a perverse outcome in that sense. The reason the RECs fell in 2006 was because we did meet our target, and also John Howard was not a fan of the MRET scheme and I think when he was re-elected the price did a multiple dive downwards, from $36 to $14, in the space of six months. When you get down to $14 it is probably not worth doing the transaction, so the market just falls away—all the buyers disappear.

Senator ALLISON—What is this hiatus, the four-year gap, in target—

Ms O'Hehir—If the ALP do not introduce—

Senator ALLISON—Yes, I understand that, but I had not quite finished the question. What does that do to the opportunity in Australia to build a renewable energy manufacturing base, whether it is the towers and the turbines or the PV systems? What effect has that had, from your perspective, on the industry here in Australia?

Ms O'Hehir—There has been a little bit of a boom through the PVRP and some of the RRPGP, but now, as those programs are being oversubscribed, people are starting to pull back and realise that it is going to have a short-term impact and the industry will stall. Part of the problem is that this has been an evolving and developing industry for many years now, working through programs that sometimes are at the whim of the deputy secretary. They are not written in legislation and they can change. So there is always this huge element of risk going forward as to how much money you put into a business doing renewable energy because these programs change and targets get met and then the whole thing falls away. It will stall.

Mr Wayland—I will give you an example of that. We have an information memorandum from an installer who has been a manufacturer—

Senator ALLISON—This is a PV installer?

Mr Wayland—Yes. It is sitting on our desk. My job is to walk it around O'Connell Street. They just do that.

Senator ALLISON—You might need, for the benefit of the *Hansard* record, to say what doing 'that' means.

Mr Wayland—They turn it over and put it in the refuse bin because there is no certainty that their money is going to see long-term growth. They know programs are, as Fiona has said, running out. Nobody has put their hand up and said, 'There will be an extension of this program or that program.' The current program of $150 million divided by the rebate of $8,000 comes down to 18,000 houses. That is for solar. America has a target of a million homes. If the government put their hand up and said, 'We're going to do a million homes in this country,' everybody would go out and invest.

Senator ALLISON—Coming back to MRET, the government's ramping-up of the new target I do not think has been released as yet. What is your view about what that ramping-up should be? Under the original MRET, it was a very slow uptake and then it picked up in the last couple of years of the measure. Do you have any advice as to what the ramping-up ought to look like, either in the government's proposal or in the one which says to bring it forward?

Ms O'Hehir—We have to have a little bit of staggered growth because we do not have such a huge industry. We are looking at emissions trading and renewable energy targets, and there is so much work to be

done. We need more capacity. So a staggered, staged growth would be the best way to go. We do not want to have a target that says, 'Okay, we have to have 20 per cent by 2012.' We could not meet that target. Obviously we need to stagger the growth, and maybe an incremental one, as you have suggested in your bill, would be adequate to grow the industry organically.

Senator ALLISON—So it could grow on a straight line basis?

Ms O'Hehir—Yes.

Senator ALLISON—Would the industry have any difficulty in meeting the targets, as described in the bill, from 2008?

Ms O'Hehir—I do not believe so. If we know that it is there, we can plan, we can invest and we can get serious money behind us. We have done some serious development work under environmental rebates Australia, that company that has significant money behind it now. We are just not sure where to take it, because what programs are going to come out to support the new target, whether it be this proposed one or others even in 2010? Something has to support the bill. You cannot just get a 20 per cent target—things have to evolve.

Mr Wayland—We have spoken to major banks, some of whom find it hard to spell the word—

Senator ALLISON—The word 'bank'? Which word?

Mr Wayland—They have trouble spelling 'environmental impact', 'rebates', 'PVRP' and terms like that. They are mainly scared away by risk. We have probably spent $10,000 or $15,000 on legal fees with one bank. They are very serious about investing. They want to put money into this environmental exercise. They have put Stern on the board. They have established million-dollar partnerships. They want to see these sorts of industries go ahead. There is a whole raft of ethical funds that are also looking for this thing to go ahead. But while it is in the laps of further committees and reports—and has no certainty—it will stay in their too-hard basket.

Senator ALLISON—I would like to shift to your comment about the RRPGP. You say that it failed because the manner in which it was set up was not orderly and expeditious. Can you expand on that comment?

Ms O'Hehir—My background is in power electronics. I used to work for a company called Power Solutions Australia, who were a large manufacturer of conversion technology in Australia and around the world. We probably had 13 to 14 megawatt of product installed for large systems such as Solar Systems and those types of products, and Singleton. In Queanbeyan there is a car park that has a lot of solar. I was the sales and operations manager that built all that equipment for those large systems. When RRPGP was first mooted I think Senator Hill was the Minister for the Environment. He was a Liberal senator and the states were all Labor. There was so much argy-bargy between the states and the feds bringing that policy to the public that the public got wind of it. Given that it was a 50 per cent rebate on the installation of a power system that cost $200,000, the whole of the Australian solar industry almost went to the wall. I did not receive an order for a single- or a three-phase inverter for something like 12 months. We had to put off staff. We lobbied—in fact, that is how I came to be doing what I am doing today. We had to work so hard to try and get the feds to talk to the states about the implementation of the program, because everybody was busy scoring brownie points backwards and forwards while a whole industry almost went to the wall.

Senator ALLISON—I do not understand why it would do that.

Ms O'Hehir—It took them 12 months to work out how to distribute the money. The money was federal money.

Senator ALLISON—So no-one was starting new projects?

Ms O'Hehir—That is right. They just could not work it out between them. It took 12 months to implement.

Senator ALLISON—Why did your organisation lose jobs because of that? I still cannot follow the connection.

Ms O'Hehir—Because the Australian public knew that there was a rebate coming out—

Senator ALLISON—So they stopped ordering. I see.

Ms O'Hehir—that would give them a 50 per cent rebate on their power system, so they just stopped ordering, like that.

Mr Wayland—They were waiting for the rebate.

CHAIR—Doesn't that illustrate the problem here? If we bring in this bill and then there is a change down the track—with the Garnaut report and emissions trading, the government then changes again—you would have that kind of stop-start, when you are talking about wanting continuous growth.

Ms O'Hehir—Yes, but I would say they are two different things. The growth of the renewable energy industry is not necessarily tied in to or an outcome of the ETS, because RECs—

CHAIR—The government will be having a look at all of it together under this system—the combined effects, what the targets are and how ETS will impact on that—so it may change the system again. If this bill goes through, won't the industry regard it in the same light—as a hold-off to the final decision?

Ms O'Hehir—No, because, again, ETS does not actually foster the growth of the renewable energy industry. Using RECs as the example, it is a generation product—it is generating electricity—whereas an ETS system, an emissions trading system or scheme, will be an abatement type of scheme where you do not use the energy. You turn the lights off or whatever, but you have not actually generated any energy; you are abating. So they are actually different and that is why they have been kept in parallel—one is generation and one is abatement. I do not know that Garnaut is actually looking into morphing MRET specifically into the ETS—I do not think so.

CHAIR—And you do not think that the change in regime, regardless of whether it is about renewable energy or energy efficiency, might change the investment pattern of people involved in the industry?

Ms O'Hehir—Sorry—say that again, please.

CHAIR—Won't it determine where people will invest? Won't they hold off investing in renewable energy until they find out what is happening with the emissions target system?

Ms O'Hehir—No, because our industry does not perceive the renewable energy target as being part of emissions trading. It does not necessarily morph straight into emissions trading, because emissions trading—

CHAIR—I understand that it does not directly relate. I am talking about where people invest their capital and if they might hold off investing until they find out whether it is going to be more profitable or worth their while investing in some emissions trading scheme instead of in renewable energy.

Mr Wayland—They are not mutually exclusive.

Senator ALLISON—I could suggest to you that the likelihood is that, with emissions trading, we are going to see more gas generation, so it will take the lowest-cost acceptable abatement schemes rather than move straight to renewable energy—is that correct?

Ms O'Hehir—That is right—yes. The best abatement will be the cheapest abatement. And, yes, the movement to gas will be significant.

Senator ALLISON—But it may not be good enough for us by the time we reach 2050.

Ms O'Hehir—To meet our targets—that is right. Part of the thing with PV or solar, or even solar water heating, is that it calls up what we call the externalities. A lot of this is about behaviour change. It is not about my behaviour change as much as it is about the behaviour change of Mr and Mrs Jones out there. Let us say we have a 'million roofs' program. When PV goes onto people's roofs they have a little counter, a little data logger, in the kitchen that tells them how much energy they are using, so you actually get behavioural change caused by having PV on the roof. There is a paradigm shift that happens because people become aware of their footprint and therefore you can get some change. Even though PV may not impact hugely on the bill, you still get behavioural change because people become aware of something that they were not aware of previously. It is really quite significant.

CHAIR—Are you saying that you are relying on the government subsidy for people to use PV and you want that to continue?

Ms O'Hehir—Absolutely.

CHAIR—Won't the government consider the subsidy in relation to emissions trading as well? If renewable energy relies on government subsidy when you have energy efficiency and greenhouse gas abatement arising from market trading, is it so independent from that?

Ms O'Hehir—Yes, it is. I am not sure that I have the question right, but the issue with emissions trading is that someone has to start doing something. Currently, believe it or not, no-one is actually doing much abatement at all. Everybody is rolling this debt, this ball of emissions debt, forward. No-one is putting in projects, whether they be renewable or abatement. The whole basket of policies is just out there hanging

around. In going forward, if we are going to be seriously meeting our targets, we cannot just look at one single technology—ETS, renewable energy, solar water heating; it has to be a broad mix to get behavioural change and to meet the targets.

Senator WEBBER—Isn't that the beauty of establishing a market, in that you will then get a mix? Once you establish an open market you will get a mix, which is what the ETS is about. I agree with your commentary that the first establishment of an ETS in Europe was flawed and we need to learn from those mistakes, which is why it is so important that we get the establishment of the Australian ETS right without much interference. Surely, once we establish that market and make it as free as we can, we will then start to get a mix and people will start to make choices.

Ms O'Hehir—Yes, but that is going to be in four years time.

Senator WEBBER—The ETS is meant to come in in 2010.

Ms O'Hehir—That is right but, if you want to evolve complementary and innovating technologies, you have to start now. There has already been a gap from when the renewable energy industry met the 2006 MRET target and everything has stalled since then at the large project end. The only reason the solar systems company installed their system at Mildura was the VRET scheme, which was a 20 per cent local target. They could then use those RECs to meet the liability here. Part of the issue was that the states were trying to push the federal government towards an emissions trading scheme, which is why we have this mix of everybody having different schemes. We talk about industry and how industry behaves. There is a liability under the VRET scheme for, I think, 195,000 VRETs for this calendar year and they only have 100 created. That is what happens when too much is going on and a federal scheme is going to morph: everybody stops, everybody pulls back. Now there is a liability of 195,000 and I think that works out to be about $8 million of non-creation because industry does not know which way it is all going to go, so they will pay the penalty.

Senator WEBBER—But all of industry is saying to the committee that they want a robust national scheme. They want to end the piecemeal approach that we have had.

Ms O'Hehir—Yes, but that is in emissions trading and in support for the renewable energy industry, in parallel.

Senator WEBBER—Are they the only two things that happen in parallel? This committee will obviously be looking at the establishment of an ETS as well because it is a market and it is an economic mechanism. Are renewable industries the only ones that we should allow to have a separate scheme and should we bring that scheme in now before the ETS or are there going to be other exceptions to the rule? It seems to me that the more exceptions we make, the more fragile we risk making the ETS, and we may end up making the mistakes they made in Europe.

Ms O'Hehir—I do not believe the mistakes in Europe were caused by a renewable energy target.

Senator WEBBER—They were caused by handing out permits for free.

Ms O'Hehir—It is a different issue. If we are talking about growing an industry to help meet a forward mix of power generation, we need a renewable energy target.

Senator WEBBER—If the ETS comes in and renewable energy is part of the mix, then your sector would not ask for a free permit? You will have some emissions trading in developing your technology. You will be happy to pay the open price? You will not want a free permit?

Ms O'Hehir—I would have to say, as a manufacturer, that is fair trade. If you are a high-intensity user you have a liability.

Senator WEBBER—Sorry, I interrupted.

Senator BIRMINGHAM—On the issues of mixes of technology and approaches and so on, earlier you briefly mentioned clean coal and clean gas types of technologies. If proven, do you accept that they have a role in minimising carbon emissions in Australia and globally?

Ms O'Hehir—Yes, I do. The thing there is the definition of 'clean'. I do not believe currently that the term 'clean coal' is adequate. I am not sure what the output still is under that word 'clean'. I think it is less than three per cent of some scientific number. So you need to drive clean coal right down for it to be acceptable in the marketplace.

Senator BIRMINGHAM—Obviously there are a couple of different technologies spoken of when people use the shorthand term 'clean coal'. Some are minimising, and there is sequestration and there are other

options. If you accept though that they play an important role in minimising greenhouse emissions, why then would they not also form part of a target?

Ms O'Hehir—The problem we have is that geosequestration is probably 10 to 15 years off. Even building a new power station is 10 years off. These infrastructure developments take years in the planning, years in the building and then you have got to have people staffing them. We do not have surety in geosequestration. I know the gas industry claims that it has been doing it for years, and in some sense they have. But even geosequestration cannot be retrofitted to any of the power stations we currently have. We would have to build all new power stations.

Senator BIRMINGHAM—Why do you make that assertion?

Ms O'Hehir—Because you cannot retrofit it. There will be some data I can provide you from background information, but I do not have that on me and I do not have it in my head. But I know that it cannot be retrofitted to the current power stations we have now.

Senator ALLISON—I think the power station has to be three or four years old at the most.

Ms O'Hehir—Yes. So it is a little known technology still. I believe BP have a site in Spain that I think that they are working on. But it cannot be retrofitted to the old power stations.

Senator BIRMINGHAM—Whether the technology is known or not, why wouldn't the same incentives exist for it under a target regime as for other renewable energies?

Ms O'Hehir—I believe geosequestration is being supported under one of the schemes.

Senator BIRMINGHAM—Or the MRET?

Ms O'Hehir—No, it is not under MRET.

Mr Wayland—There were millions of dollars handed out. But coal sequestration is not our area of specialisation, please. We cannot answer on that exercise.

Senator BIRMINGHAM—I am focussing specifically on the MRET. If you are going to have within the energy sector specifically a market driven approach to try to minimise emissions, why should only some sectors of power generation be included in that approach?

Ms O'Hehir—I do not believe that things should be excluded. I think we need to explore everything we possibly can—absolutely.

Mr Wayland—We are not here to just argue one particular case.

Ms O'Hehir—For a PV or solar water heating. This is about greenhouse.

Mr Wayland—Do you think Fiona has made the point that the two schemes are different? What Fiona is talking about is that, by bringing this bill forward, you will stimulate the development of this particular industry, which will be ready then to step into whatever other scheme is brought in; whereas if you delay it there will not be investment, there will not be critical mass, they will not have built it up and it will be another two years behind if you attract investment into it again. The serious institutional investor is a very funny, fickle fish. We only have to see the way they flow like lemmings down O'Connell Street and invest in all sorts of things where commonsense would have said, 'Don't touch it.' We can see that written all over the *Financial Review* now.

By bringing this bill forward, it says that this is something that the government supports. It is running in parallel with that one over there. Start building factories. Start putting them on roofs. Start bringing efficiencies down from 40 per cent to 17 per cent, and things like that. Has that point been made or not?

CHAIR—If we have any more questions, you will know. Thank you for your time and for your assistance to the committee.

Proceedings suspended from 12.30 pm to 1.44 pm

JACKSON, Mr Robert, General Manager, Policy, Clean Energy Council

CHAIR—I welcome our next witness, from the Clean Energy Council, who I understand will be speaking on both bills. Mr Jackson, I invite you to make an opening statement.

Mr Jackson—I will make a brief statement. For those of you who do not know who the Clean Energy Council is, we were formed last year as an amalgamation of the Business Council for Sustainable Energy and the Australian Wind Industry Association to provide one powerful voice, as we like to describe it, through to government on all matters to do with stationary clean energy. We cover everything from energy efficiency through gas-fired generation through to renewable energy generation, both existing and emerging technologies.

On the specifics of these bills, I do not intend to go into any detail on those but, rather, to look at the broader picture. The Clean Energy Council believe we need a suite of coordinated policies and legislation to cover everything. We see emissions trading as a very key element in that package, but it is not all that is needed. We fully support the need for a number of complementary measures to make sure that Australia meets its climate change targets in the cheapest and best way. I might leave it at that for now.

CHAIR—Thank you, Mr Jackson. I refer to the submission which you have just circulated. You say that the current MRET design has worked successfully. Could you expand a bit on the ways in which you think it has been successful?

Mr Jackson—It has delivered—and I should have the numbers in front of me but I do not—significant quantities of new generation across a range of technologies. While a significant amount of that has been from wind generation, it has delivered biomass and it has delivered upgrades to hydro and also new hydro. It is starting to develop other technologies. And there is a significant amount of solar water heating and solar PV that has certainly been assisted by the MRET. It has done all this at minimal cost to the government in that it is funded through a levy on customers. But it has done so by leveraging that cost very well—by narrowing who gets paid for it, it does not put the full cost there. There is a significant leverage effect so that the payments are more efficiently used. It has been very efficient in delivering things. We are at the moment, I would suggest, ahead of the nominal trajectory that was in place and there are thousands of megawatts of new plant just waiting to come on line.

CHAIR—Do you think the bill we are considering, the renewable energy bill, would enhance that success?

Mr Jackson—We are very keen to see the government's election promises put into place to extend MRET. We suggest that it can be done in a fairly simple way. I am not sure that we would necessarily agree with the exact details of this bill as the methodology for doing it. I would suggest—and it is covered in the submission—that the trajectory target which is in the main bill could be modified. There are some words that could be modified to change the end date beyond 2020, out to 2035, again in line with the promises. We would also suggest that we would possibly need to revisit the penalty price and increase that to take account of some of the increases in the costs of technology or of buying the plant. Around the world at the moment there are shortages that have, at least in the short term, driven some price rises.

CHAIR—In terms of energy efficiency, you talk about the inclusion of a white certificate energy efficiency trading scheme—applied to the electricity and the gas sectors?

Mr Jackson—Yes.

CHAIR—Why both?

Mr Jackson—To get the broadest range of results. They are both key elements in stationary energy and in the energy that is used in buildings, offices and factories.

CHAIR—Is your focus more on reducing energy usage rather than the greenhouse gas effects of whichever energy you use?

Mr Jackson—If you reduce energy use in general from either technology you will reduce greenhouse gas emissions. We believe that there is a lot to be gained and reports such as McKinsey's report from last year showed that a lot of energy efficiency savings can be made with a positive benefit to the businesses if we can overcome some of the barriers that are there. We think that we can drive that so that at on one side we can reduce the emissions and on the other side we can mitigate the costs of that.

CHAIR—What barriers do you see there currently?

Mr Jackson—A lot—we probably do not have all afternoon to go through all of them. There are areas such as the split incentives in the building industry between the builder, the owner and the tenant. There are issues to do with the appliance standards that could be improved. There is a need in industry and in business to educate people about the difference between opex and capex and to show them how they can save some operating costs in the long term by spending some money up-front. But getting businesses to actually look at that has been difficult to date. If they have some capital to spend they would probably rather buy a new widget making machine than trying to save some energy and some money. There is a range of issues.

CHAIR—You talk about a national energy efficiency fund to be created from revenues from the auctioning of permits which would be used to support energy efficiency measures that are not easily incorporated into a white certificate scheme. Could you expand a bit more on what kinds of energy efficiency measures would not be easily incorporated?

Mr Jackson—I think you have me there with a question which I might have to take on notice, if that is fine. I will get back to the secretariat with a more detailed answer on that.

CHAIR—Thank you. Are there any other questions?

Senator ALLISON—Just to be clear, Mr Jackson, you support both bills, but your submission suggests some further extensions of them. You have a range of dot points.

Mr Jackson—I fully support the intention of the bills, as I said. I think that there are other wordings and other modifications to the MRET legislation that might be more appropriate to deliver the intentions.

Senator ALLISON—Could we drill down into what you are talking about? The points you have made are very worthy and I am not sure whether they really belong in that bill, but you might tell us otherwise. Regarding research and development funding, are you saying you would want to see that in the bill or is that just—

Mr Jackson—No—that is additional to the current bills.

Senator ALLISON—And you agree with the objective of 20 per cent renewable energy production by 2020, which is the government's proposal, but are you saying that feed-in tariffs paid for gross generation for solar PV should be part of that?

Mr Jackson—No—again that would be separate.

Senator ALLISON—Okay. So all of those points under 'General comments on the bills' are outside the bill, but—

Mr Jackson—They are general comments.

Senator ALLISON—It would be nice if they were there?

Mr Jackson—Yes.

Senator ALLISON—On the final page you talk about the government's election promise and say:

A RET allows renewable energy to be deployed earlier than would occur under an ETS alone, thus reducing the long term costs of meeting Australia's emission ...

et cetera—that is just a statement. Again, you are not suggesting any change to the bill?

Mr Jackson—No.

Senator ALLISON—The minor amendments that you are talking about take the target beyond 2020, until 2035. Did you have a recommendation for the number of gigawatt hours that should be the target by 2035?

Mr Jackson—The recommendation that we are making is that it remains at the 45,000 from 2020 all the way out to 2035.

Senator ALLISON—So you do what the original MRET failed to do which was to set the ongoing need to generate?

Mr Jackson—Yes.

Senator ALLISON—I understand. In the submission you also say:

- increasing the penalty price to a level above the marginal cost of abatement ... maintained in real terms ...

Again, do you have a suggested level for the penalty?

Mr Jackson—We are still debating that and working on that. There are a lot of variables in the air when it comes to trying to do some modelling to calculate a figure. I have had figures suggested to me around $60, but I need to still work on finalising that.

Senator ALLISON—I have been racking my brains trying to think about the debate at the time that MRET went through, but I think there were suggestions about indexing that so that it grew over time. Is that right? Is that something that you would envisage?

Mr Jackson—We would probably argue that it should be maintained in real terms and therefore escalate with CPI.

Senator ALLISON—Can you tell the committee what you think would be the effect on the industry of bringing forward the start-up time for MRET to begin this year? What sort of benefits would accrue to the sector by gaining that extra 18 months or so?

Mr Jackson—At the moment, there is a large degree of uncertainty among my members out there who are trying to build projects. There are projects with planning approvals waiting to go, which at the moment cannot be justified internally within their businesses until we have some certainty on exactly what is going to come out in the legislation, as the election promises get turned into reality. The earlier that starts, the earlier we can start to deliver those projects. There is also uncertainty out in the marketplace with the current Victorian scheme and what that means—whether you can build against that scheme rather than MRET, or how that scheme would be transitioned into MRET. There are issues to do with the uncertainty around that, so anything that assists in overcoming some of those areas of uncertainty would be of great value to the production of these projects.

Senator ALLISON—If the government were to say, 'Well, we are not going to bring forward the start-up of the increased target but we will give you full details of what the scheme will finally look like in 2010,' would that assist?

Mr Jackson—That would assist. I would suggest—given what I believe are the minimal changes that are required—they should be able to say that they can do that by 2009, rather than 2010. It certainly would help, but I think there would still be some reluctance to commit to too much until the legislation was actually passed.

Senator ALLISON—We heard this morning, though, from Greenbank that there was now resumed activity—that renewable energy projects were either on the drawing board or getting kicked off as a result of this promise. Is that not your understanding?

Mr Jackson—There are some projects going ahead, and there are other projects that I know of that are on hold. There are some projects being built under VRET, though last time I looked there were only two generators actually registered with VRET. There are some others that may at some stage have to make a decision as to what they are going to do. Yes, there are some that have been justified but some that are waiting.

Senator ALLISON—In relation to the penalty price as it was set, that would now be well below the sale price of RECs, would it not?

Mr Jackson—Yes. The current REC price is somewhere about $52 for spot RECs.

Senator ALLISON—Is the penalty price $39, from memory?

Mr Jackson—It is $40 at the moment. There is an issue with the tax treatment of it which may encourage retailers to pay more than the $40 of the actual penalty, but that does vary from retailer to retailer as to how much of that they are willing to do.

Senator ALLISON—You are likewise supportive of the energy efficiency bill. You make a couple of suggestions. I have some questions for you. When you say:

A national energy efficiency fund

to be created with revenues from auctioning of permits and used to support energy efficiency measures that are not easily incorporated into a white certificate scheme.

Can you give the committee some examples of what kind of energy efficiency projects they might be? What would be excluded?

Mr Jackson—I couldn't, off the top of my head. As I think I answered previously, I will get some examples through to the secretariat, hopefully in the next 24 hours or so.

Senator ALLISON—In the next point, you say:

Standards—

need—

to be raised to ensure all cost effective energy efficiency measures are incorporated into new buildings and progressively into existing buildings at the time of sale and/or renovation.

We know that the number of new buildings every year is quite small, but can you give the committee some idea of the percentage of building stock which is turned over through sale or renovation?

Mr Jackson—Again, I have not got it in front of me, but I will endeavour to get it for you as quickly as I can.

Senator ALLISON—This might again be something you need to take on notice. On the current disincentives, in the second-last dot point on page 2 you say:

Regulation of the electricity sector, particularly of monopoly network businesses, will need to be reformed to provide incentives and remove any disincentives to:

- investment in customer energy efficiency, and
- reward utilities for helping their customers to save energy.

Does the bill do this adequately?

Mr Jackson—No.

Senator ALLISON—If not, what needs to be added to remove those disincentives? What do you mean by that?

Mr Jackson—We are talking about the network. The bill itself, as it stands at the moment, is directed at the retail businesses rather than the network owners. There are some issues where a network business is incentivised to increase the size of its network rather than look for opportunities for energy efficiency so that the existing network might be adequate. Distribution businesses, in general terms, make their money by the amount of electricity that flows through the wires, and therefore they have the incentive to increase that rather than to identify the cheapest way to keep the customers supplied.

Senator ALLISON—Would that include transmission losses?

Mr Jackson—Yes, it should. They are parts of the issues that need to be further addressed with the regulators.

Senator ALLISON—How would you do that?

Mr Jackson—Network losses would be a difficult one, but it certainly should be possible to cost it to show what the losses are, what the cost of those losses is to the marketplace and how that could then be saved by an energy efficiency scheme targeted to the locations where it is needed.

Senator ALLISON—So we would be talking decentralisation of generation rather than some way of making the wires hang on to the electricity more effectively.

Mr Jackson—Yes, or you might incentivise people to change their consumption habits. Decentralised generation is certainly one option. It might be that we would go through to the factories at the other end of the wire and say, 'If you improve the efficiency of your plant by changing your methods inside, we don't have to upgrade the wire; therefore, we'll give you some money.'

Senator ALLISON—Do you think there is scope in this legislation for doing that, or is that the subject of—

Mr Jackson—I think that is the subject of further work outside this legislation.

Senator ALLISON—Do you get a sense that the state governments are focused on this need at present?

Mr Jackson—We have seen some evidence that the AER—that is, the Australian Energy Regulator, which regulates network tariffs—is starting to think about this issue, but it is still a long way from delivering the benefits that we think it could.

Senator BUSHBY—I have a couple of questions. Firstly, I notice that you say here:

Skills training—

needs—

to be rapidly expanded to meet the … growth in the … industry.

Mr Jackson—Yes.

Senator BUSHBY—What sort of skills do you think will need to be developed to meet that industry demand?

Mr Jackson—It is trade skills and the skills of people who understand what energy efficiency is and how we can save money in here; skills to teach people that those downlights that you have got up there are probably not very efficient and that there are better ways to light this room than downlights; and skills to train the electricians, the lighting experts and the heating and air-conditioning experts.

Senator BUSHBY—Thank you. In the point above that, you mention—and Senator Allison has mentioned it—the need to raise standards in respect of existing buildings at the time of sale and/or renovation. Are you suggesting that those standards be imposed on all buildings when they are sold, so that there is a requirement to retrofit before a building can be sold?

Mr Jackson—Most certainly. There should be a requirement to retrofit that which is easily or economically done, yes.

Senator BUSHBY—Similarly, with renovation, are you suggesting there that the same applies? Say you have a house and you want to put an extra room on.

Mr Jackson—Yes.

Senator BUSHBY—Are you saying that you would have to then retrofit the rest of the house at the same time before you can get approval to put the extra room on, or just that the extra room would need to meet the requirements?

Mr Jackson—You should be required to do, again, that which is viable to be done economically at the time. We do not expect people to rip up a flatiron roof and put insulation underneath it if that is too difficult, but if it is something that is relatively easy and is likely to actually be a cost saver in the long term they should be doing it.

Senator BUSHBY—How would you determine, though, what is economically viable? If you are imposing requirements on people who are selling or renovating houses, who determines what is reasonable at that point?

Mr Jackson—The Victorian government has a recent change to the building regulations that says at renovation they have to now, I think, move to a five-star rating. It can be done; it has been done in Victoria and could be expanded nationally.

CHAIR—Thank you, and thank you for your submission.

Proceedings suspended from 2.05 pm to 2.17 pm

PEARS, Adjunct Professor Alan, Private capacity

CHAIR—Welcome. Thank you for appearing a little earlier than scheduled and thank you for your submission. I understand you are here to talk about the National Market Driven Energy Efficiency Target Bill 2007 [2008]. Do you have any comments to make on the capacity in which you appear?

Prof. Pears—I am from RMIT University, but I am appearing here as an individual.

CHAIR—Would you like to make an opening statement?

Prof. Pears—Yes, if I could. First of all, thank you for taking the time out to hear me. I am conscious you have had to rearrange a few things and my teaching commitments got in the way a bit. What I thought might be useful was to try to summarise what I see as the big issues in something like this scheme and then to have some discussion.

The first thing is that I think there is almost universal agreement that we need a more effective driver to capture energy efficiency potential in Australia. There is such a powerful case that we are failing to capture the least cost solutions, not just for climate change but also to avoid unnecessary investment in energy supply infrastructure and so on. I guess that raises the point that energy efficiency is not just a climate change mitigation measure; it actually offers multiple benefits, such as avoiding unnecessary investment in energy supply capacity, improving productivity and facilitating innovation. There are a lot of benefits there that we should value. In the context of setting up incentives for energy efficiency, I think it is short-sighted to fail to incorporate some of those other benefits when we are developing these programs.

In the context of emissions trading, I think it is becoming clear now—through work such as the ASBEC study, which I think you have been told about today—that, for a given emissions trading cap, energy efficiency reduces the cost of meeting it. Essentially, if the cost of energy efficiency is lower than the price of the permit, then shifting more emphasis onto energy efficiency reduces the overall cost of emissions trading. At the same time, if we decided to include mechanisms in emissions trading schemes, then energy efficiency could gain some kinds of credits to actually tighten the emissions trading cap. I think there is some value in looking at that.

Pragmatically, when we are looking at the potential of national action, we already have to confront the fact that a number of states are already setting up energy efficiency trading schemes of one kind or another—New South Wales have had the GGAS scheme for some years. In many ways, at a national level we have the choice between acting nationally now or waiting and letting a number of states do different things and then trying to sort out the mess later. When we look at water and, to some extent, energy market reform and a lot of other things like that, what we are seeing is that waiting until later can be messy, take a long time and have a lot of inefficiencies. So there is an argument for moving forward. However, if we do act nationally now, I think it is very important first of all to deliver quickly. There is a lot of scepticism out in the electorate, in my view. If attempts to develop a national approach mean significant delays relative to what is already being promised by states, I think that will feed that scepticism.

A second point is that a national approach will need to lead on stringency and effectiveness rather than delivering what I guess a lot of people would call the lowest common denominator outcome. Again, our experience with national processes on energy efficiency is that they have been slow and they have delivered fairly weak outcomes. Given the pressure for action, if national efforts do not deliver leading-edge outcomes then some of the states will continue to do their own thing despite the national effort. They are the sorts of pragmatic problems that are there.

At the same time, stepping back from those problems, while I think there is a lot of interest in an energy efficiency trading scheme—and I will talk a little bit about pros and cons in a minute—if we did not want to do an energy efficiency trading scheme, the reality is we do have a range of policy tools that we could use. The issue is that those policy tools have not been used very powerfully in the past. Many people would see an energy efficiency trading scheme as a way of creating an overarching framework that would drive energy efficiency harder and in a more coordinated way.

Even with an energy efficiency trading scheme, I think we will still need a combination of different tools to deal with some aspects. For example, an energy efficiency trading scheme could well provide positive incentives to the leaders, while mandatory standard building codes and things like that could effectively lock in the benefits that were being captured by the leaders through an energy efficiency trading scheme. Again, if we are looking at an energy efficiency trading scheme, then approaches like amendment of the MRET

legislation, as suggested by the Democrats, or even some kind of mirror legislation might be the quickest and lowest risk strategy for delivering an outcome, and that would also build on existing infrastructure and experience that we have got.

As far as the pros and cons of energy efficiency trading relative to other mechanisms are concerned, on the pro side of we have three states either with existing trading experience or working hard or having done a lot of work to develop practical programs. Efficiency trading can work with emissions trading, mandatory standards and so on. It can also be targeted to low income groups or high-energy supply infrastructure areas. So an energy efficiency trading scheme can be very flexible and can give government a lot of opportunities to optimise the outcomes. As I said earlier, it provides an overarching framework for energy efficiency, and—at least in principle—the whole idea behind trading schemes is that they should allow overall cost minimisation through the trading mechanism and through the transparency that is in it. Again, this does not always happen, but that is the principle.

One of the significant benefits of a trading mechanism is that it limits the market power of energy retailers. If we look at the early British scheme where there was basically no trading, effectively the energy retailers determined what programs were implemented and who did the work. They drove the market in their own interests. By introducing a trading component to a scheme like this, you at least allow independent organisations to create certificates and then to sell them to the bidders. I think that energy efficiency trading schemes can take into account multiple benefits of energy efficiency and in fact I believe they should, not just greenhouse gas emissions. I think it will be important that any energy efficiency trading scheme evolves over time and that we actively look at the experience we are gaining so that we can get the best out of it.

The last thing I want to talk about is the cons—the disadvantages of a trading scheme. I think one clear thing which is emerging with the debate over emissions trading is that there are administrative costs, there is complexity and there are enforcement issues which are major and need to be dealt with well. If the target or the obligation is set too low or is not able to be adapted over time, you can get a boom-bust problem. We have seen that with the mandatory renewable energy target, where people put in more capacity than was expected and we ran out of signal in the marketplace. You can also create distortions if you do not structure the program well.

A number of the submissions and quite a lot of the discussion have also focused on the very many practical issues that exist—that is, on the concept of ensuring that the savings are in addition to what would have occurred and the concept of getting net outcomes. One of my colleagues who is in the audience at the moment pointed out an example where, if you receive an incentive to buy an energy efficient refrigerator, that may still mean that you keep the old refrigerator in your garage as well. You are, in that sense, being encouraged to use more energy. At the same time, those kinds of anomalies can be addressed by effective structuring of the incentives and the program.

You can have barriers to participation. If we put lots of charges and fees in a scheme like this, that might discourage people from active involvement. There is debate about the coverage and the targeting of the program. Do we cover just residential or commercial? I think there is an argument to look at all non-emissions trading sectors as a reasonable target. There is a lot of debate about whether or not the deeming of lifetime benefits is a good idea. On the one hand, it introduces the risk that outcomes will not be delivered. On the other hand, because so many people use very high discount rates with regard to the future benefits of energy efficiency, deeming is at least the bird in the hand rather than the two birds in the bush. That can make it a very powerful mechanism. I think we should also, in structuring a program like this, be aiming to maximise the sustainable development of an energy efficiency industry. You might be aware that the Victorian government had an inquiry into this industry a couple of years ago and certainly saw that there was a very big need to build capacity in this industry.

Of course, another problem with an energy efficiency trading scheme is: what target or cap should apply? Our history has been that governments have tended to listen to vested interests, particularly the energy supply side, and set low targets which have then been exceeded. I think you can develop adjustable targets that would overcome that, but it is a problem with a scheme like this. That is my attempt to take a bit of an overview of the issues as I see them and, in some cases at least, flag them and in other cases suggest some of the things that I think might work. I hope that it is useful to you and that I can answer questions from you.

Senator EGGLESTON—You said the states might do their own thing in the absence of an energy efficient trading scheme, so how would you see this being managed? Would it be through some overarching national body and a Commonwealth-state agreement that the Commonwealth scheme would prevail?

Prof. Pears—I think the experience we gained with the renewable energy mandatory target provides some basis there. It highlights that, first of all, you have to set up a national framework, and have the legislation and the national authority. I think the appearance of things like the Victorian renewable energy target and the New South Wales one highlighted what happens when the national process is not seen to be leading. In many ways the administrative frameworks have been suggested by the Democrats. I know the Origin Energy submission talked about mirror legislation as another option. I think the mechanics of those things are clear. There is a political challenge, if you like, in negotiating consensus among states to move forward together. At the same time my point is that if we do not act nationally now, in three or four years from now, we could have a fairly good mess to sort out. So in a lot of ways we will end up that way anyway.

Senator EGGLESTON—When you talk about states doing their own thing, you are talking about Victoria, I suppose, and the solar operation at Mildura?

Prof. Pears—Yes. Victoria has a commitment to start what is called VEET, the Victorian Energy Efficiency Target scheme, from January next year. South Australia is, I believe, in consultation with the community about a thing called REES, and the New South Wales government has the Greenhouse Gas Abatement Scheme, which has an element of energy efficiency trading in it. My understanding is that some time ago Victoria put out a press release flagging that, if there was a national process to develop an energy efficiency trading scheme, they would be keen to cooperate with it. These are on the table already, as far as I understand.

Senator EGGLESTON—There is nothing too much wrong with each state developing its own projects, is there? For example, there is tidal power.

Prof. Pears—That is Western Australia. I sit on the fence a bit with this because, having been involved in appliance energy labelling and building energy code work at a state level when the national processes broke down, I am well aware of the potential for individual states to be leaders and to, in a sense, carry out pilot projects which at some later stage can be adopted by the Commonwealth at a national level. Appliance energy labelling and building codes are examples where that has happened but it has happened over a 15-year period and there has been a lot of angst, confusion and wasted money while people have tried to comply with different requirements in different places.

I notice that the energy retailer submissions to this inquiry have all expressed concern about having to have different state approaches. I think we probably should take some lessons from the fact that we are just now, after 15 years of energy market reform, moving towards a national energy market regulator. We could sit back and let all the states do their things and learn a lot. It is really a question of whether the Commonwealth wants to lead or be an observer, I guess. I think the message is that it is probably more efficient in many ways to be a leader, but the choice is yours.

Senator EGGLESTON—You have said all the right things.

CHAIR—You were saying that it would need to be set up soon if it were to be a leader. When would soon be? Can you put a figure on that?

Prof. Pears—The issue is that the Victorians are committed to starting in January 2009—and I cannot speak for the Victorian government, because I do not work for them—but clearly they have some momentum behind that time frame, so delays that are long beyond that may be an issue for that government. I think the other concern that many people in the energy efficiency area have is that, if you have delays that stretch into years, that would be seen as undermining progress on energy efficiency rather than helping it. So I guess, for me, soon would be as quickly as possible, but probably it would need to be functioning by, say, the middle of next year or something like that to satisfy all of the agendas, or else there would have to be a very effective process of engagement of the community and the states so that they were happy and they saw some reason for the delays or they had some interim programs that would fill the hole or something like that.

Senator ALLISON—What has been said several times today is that you cannot embark on something like an energy efficiency trading system outside the process of emissions trading. Do you have a comment to make about that? Should we just wait until 2010, when we have got an overall program?

Prof. Pears—No, I completely disagree with that. Just as we ran MRET from 2001 without an emissions trading scheme, you could run an energy efficiency trading scheme completely separately from emissions trading. Or as a government or a parliament you could introduce the energy efficiency trading scheme and then, from 2010 or whatever, you could say that efficiency trading certificates interacted with the emissions trading scheme in these ways. So I do not see any problem at all. MRET is the example of running a scheme, and I think they are dealing with the issues of MRET and emissions trading.

Senator ALLISON—People talk about the necessity for them to be complementary. You have briefly gone into that. Maybe you could explore that a bit more for the committee.

Prof. Pears—The issue is that there will be some kind of threshold above which organisations participate in emissions trading. So a logical thing to me is to focus an energy efficiency trading scheme on the non-ETS sectors, which is really what, as I understand it, they are doing in the British scheme. The value of that is that the non-ETS sectors are essentially only seeing a flow-on price effect from emissions trading. So, for example, a power station or a large industry is actively engaged in emissions trading. They are seeing the costs and benefits of options and presumably making judgements. If I am an electricity consumer—a small to medium electricity consumer—what will happen is that my energy retailer will buy electricity from a power station and the power station will pass through some carbon price costs and then the retailer will pass those costs through to me, presumably with a profit margin, and then we might add in the GST as well—I do not know. So we are just going to see price effects on energy and on goods and services for the bulk of the economy and a large proportion of the emissions from the economy.

Senator ALLISON—Can I just interrupt there. So you are saying that from emissions trading all we will get as a driver for efficiency is a slightly increased cost for generation?

Prof. Pears—Exactly. We will see a small increase in energy costs or the energy component of goods and services that we buy. The evidence is that the scale of the price signals will not do very much to change people's behaviour. Some work in the US recently showed that in the residential and commercial sectors a doubling in energy prices might reduce energy consumption by 15 or 20 per cent. A doubling in electricity prices for those sectors would be equivalent to a carbon price of $150 or so a tonne. I do not think $150 a tonne is politically very viable for an emissions-trading scheme, but also $150 a tonne was giving you only a 20 per cent or so reduction. You were not even capturing anything like the full energy efficiency potential using that price signal to drive people's behaviour.

I presented a talk last week where I showed that the effect of an increase in petrol prices due to a carbon price of $25 a tonne would really be only a few dollars a week. When the cost for a new car buyer of running a car is in the hundreds of dollars a week, this is noise. If we want the non-emissions-trading sector to be actively engaged in energy efficiency, we need a more powerful program or strategy than just relying on the flow-on effects from emissions trading.

Senator ALLISON—I will just press that point again because it has come up today. Everyone has said that if we go ahead with a trading scheme like this it would need to be part of a whole suite of energy efficiency measures, including R&D, skilling the workforce and so forth. Is there a danger that in proceeding now this would somehow close off options under emissions trading or be contradictory to it? Is there a danger at all in any of that?

Prof. Pears—If in particular you started off by completely quarantining it from emissions trading. The reality is that, if I save electricity in a household or a commercial business, I am reducing the amount of electricity my energy retailer has to buy, which in turn means that less electricity is generated and fewer permits need to be bought. So at a fundamental level whatever we do in the non-emissions-trading sector as I see it reduces the need to buy permits amongst the emissions-trading groups. We can then make choices about whether the flow-on effect of that is either to effectively reduce the cost of achieving a given target, which was modelled in the ASBEC study, or to introduce some mechanism where a certain number of certificates means that the emissions cap is tightened a bit. To me these are choices that can be made down the road because the fundamental integrity of getting a scheme up that drives energy efficiency is urgent. I think the other aspect is that in a sense the harder we drive energy efficiency sooner rather than later will make the introduction of emissions trading less risky.

Senator ALLISON—One of the areas I have heard you speak on many times is stand-by energy use. Can you see how a trading scheme might actually deal with some of the wasted energy in that area? Can you paint a picture of how that might work?

Prof. Pears—Again, there is a lot detail to be developed in a scheme like this. In principle, a manufacturer or importer of products that could demonstrate that they have lower standby energy consumption than some reference that was set by the scheme operator would essentially be able to provide evidence that their products were saving energy relative to other products on the market and could then, essentially, create certificates or claim credits, or whatever way you want to do it, and they would be linked to the amount of energy that is saved. So I think that that is straightforward. But if you were running it more downstream, an energy retailer

or a market intermediary of some other kind could consciously choose products that had low standby power relative to the average—again, relative to this benchmark that was set—

Senator ALLISON—It could be a standard, could be average, could be something else—

Prof. Pears—This is something for the detail of the development of the scheme. To my mind, with standby energy the amount of money for each individual product would not be large but there would be a number of people within the system who could aggregate their savings to a point where it was worthwhile for them and it could drive change.

Senator BIRMINGHAM—Professor, in terms of setting a target for an energy efficiency scheme, what process would you advocate going through to set such a target? Is there a range of targets that you would expect would be the figures around which we would be talking?

Prof. Pears—Goodness, we are designing the whole scheme here, aren't we? My view is that we have a history of underestimating the savings achieved by energy efficiency. We are facing a situation at the moment where there are air conditioners on the market which, if we allowed them to show their full label, would get 10 stars, but they are not getting recognition. We have got examples of commercial buildings that are well and truly off the scale of the Australian Building Greenhouse Rating scheme, and things like that. So I think that in terms of innovation we have historically underestimated the potential for savings.

At the same time, if we look at our experience with MRET and other programs, vested interest groups—in this case energy retailers who see themselves as having an obligation—will be lobbying to get the minimal obligation they can, as you would. If you try to set a fixed target and get it right first time, you will underestimate the target that is really appropriate. Alternatively, you can actually design the scheme so that you will put in a preliminary target but you will have a mechanism for adapting it based on the data that you are collecting from what is happening. If you are achieving more savings at lower cost than you expected, that would be a rationale for cranking up the target. So there are mechanisms that you could put in place and I believe that right from the start you should have some kind of mechanism like that.

If you look at emissions trading, they have got this concept of gateways five years out and refining the targets. If we did not do something like that we would end up with the same problem we had with MRET, whereas either the national program would have to revise the target or you would get individual states starting to bring in their own supplementary targets, and things like that. We need to be aware that we do not know very well how much potential there is. In general, it is likely to be more than we expect and if we do not design the scheme with that flexibility in mind, I think that it will have its problems. Is that a step towards answering your question?

Senator BIRMINGHAM—It is. That is helpful, thank you.

Senator WEBBER—I initially want to go back to the discussion we were having before when you said that you do not think that price is going to be a key indicator to changing behaviour. I want to go back to the price of petrol. A change in behaviour is not necessarily in direct consumption, though. If you look at what is happening to the Australian car manufacturing industry, because the price of petrol has gone up people have changed the kind of car that they buy. So their behaviour does not necessarily mean that they buy less petrol; they look at changing their behaviour in other more indirect ways. Surely that is not just something for the Australian—

Prof. Pears—The thing you want to keep in mind here is that the price effect we have seen on petrol in the last few years is equivalent to a carbon price of over $150 a tonne. So, in that sense, it has been a pretty major shock to the system relative to what we are expecting from emissions trading or other things if they are going to stay politically doable. The whole situation—let us face it—is very complex. In Victoria, for example, we have been running with the five-star house regulations. When they were introduced, the government was very optimistic that they would reduce energy consumption and greenhouse emissions. Then we get a study saying that actually—because of bigger houses, more central heating and lots of halogen lights—new houses are higher greenhouse emitters than the stock. That reflected the fact that there are a whole lot of complicated factors going on that are about people's relative disposable incomes, their perceptions of their future incomes and interest rates. We are only one factor in all of that game.

I guess the modelling that I talked about from the US Energy Information Administration gives results that are kind of similar to those of Australian economic models. The Australian economic models say that, in general, it takes a large change in energy price to achieve much of a change in energy consumption. I am not an economist, but you can go on at great length about that being the case. That is the research that I have

looked at to say that if we have a modest change in energy costs it will not have a big impact on our behaviour. But if that is in a context of everyone thinking that the world is going to run out of oil and that next week climate change will wipe out half the South Coast of Australia then maybe they will all change. But they will not actually have changed because of the energy price; they will have changed because of a bigger impression or perception of what reality is or what the future is going to be.

Senator WEBBER—So a lot of the assumptions around this are based on there only being a modest increase in the price of energy.

Prof. Pears—Well, no. I guess my argument that we need stronger measures to drive energy efficiency is based on an assumption that the flow-on price effects from emissions trading will not capture anything like the full cost-effective energy efficiency potential. So, given that capturing more of that cost-effective potential is better for the economy overall, a mechanism that captures more of that potential is a good idea.

Senator WEBBER—An ETS is coming in, and it is going to have, I think, some quite far-ranging effects on the way the Australian economy operates. It is going to be an incredibly big reform and a serious issue for us to grapple with in a public policy sense. There is a debate going on about unintended consequences of reforms that we bring in before the ETS—because of how far-reaching the ETS will be—because we want it to be as robust as possible and then look at, perhaps, other alternatives that we need to bring in. If we bring this in now, and then the ETS comes in and we then realise that we have to do something else, is that continual change going to have an impact on the sector as well, or do we bring this in, do the ETS and then just not go back to the renewable sector—we do not have a look at the impact? One of the things people are saying to us is that they are concerned about things being stalled but they are also concerned about a piecemeal approach—the constant change approach—and that that does not lead to the sustainable development of an industry either. I guess, therefore, that the either/or for me is to get the ETS in first and then look at an overarching reform package.

Prof. Pears—I still come back to the point that if we are targeting this program at the non-ETS sector then we are dealing with small to medium businesses and households that will not be directly engaged in trading or actively involved in ETS. In that sense, I do not necessarily see a problem of complicated transitions and things like that because they will not necessarily be that conscious of ETS. I come back to the other point that the sooner and the bigger the savings we capture through energy efficiency are, the lower the cost and political difficulty of delivering emissions trading will be. I see early action in this area as actually facilitating a smooth introduction of emissions trading. At the same time, I am very conscious that the energy efficiency industry was decimated through the 1990s and is very slowly starting to rebuild itself. The signals that are there at the moment are not sufficient. Again, governments can introduce short-term, discreet mechanisms to drive the development of this industry and the capture of some of the benefits. So that is an option to introducing an energy efficiency trading scheme. It really is a policy choice I guess. The thing I would be most concerned about is that, if we delay more effective mechanisms of capturing energy efficiency, it will make emissions trading harder and more expensive. We will lose years of momentum that we could be building.

Senator ALLISON—You mentioned that we lost momentum and that that was essentially due to privatisation, which wiped out demand management programs that were in place. Is that right?

Prof. Pears—Yes. If we take Victoria as an example, in the early 1990s the State Electricity Commission was spending $30 million a year on energy efficiency and demand management programs which had a net societal benefit of more than $10 million a year. All of that was cut out in the introduction of energy markets. I was reading the National Greenhouse Response Strategy, the National Greenhouse Strategy of 1998 and the COAG Energy Markets Review in 2002, and every one of them essentially says we have got to make the demand side work if we are going to get energy markets working properly, and we are still not doing it. Energy markets have done enormous damage.

I am now on the Plumbing Industry Advisory Council for the Victorian government and we are looking at trying to train up plumbers to do solar hot water and all of that stuff, and there is a real shortage of plumbers. It actually goes back to the fact that the old Gas and Fuel Corporation used to train all the apprentice plumbers. Once they disappeared, plumber training fell in a hole and now we have got an ageing population of plumbers who do not seem very interested in climbing on roofs and installing solar hot water services. So there are enormous problems that have been caused by energy market reform. The other factor was that at least for a short period there were reductions in energy prices, which meant that a lot of the potential customers for the energy management industry basically said, 'Well we think energy prices are going to go down and down, so we do not need to invest in energy efficiency.' The industry lost momentum in those ways.

Senator ALLISON—Coming back to your comment about skills, what is the best mechanism for skilling up the workforce—the electricians and other tradies—who need to know a bit more about energy efficiency? Could the trading system that is being proposed be used for training?

Prof. Pears—I think there are a few factors. First of all, from my observations of tradespeople, they will engage in additional training if they believe it will make them more profits and improve the success of their business in the immediate future. The State Electricity Commission had as one of their energy efficiency programs in the early nineties a very simple thing: if you were an electrician and you went into a wholesaler and you bought the energy efficient fluorescent lamp ballasts, you got $2 for each one you bought. These are the kinds of things that work very well. Whether it is an energy efficiency trading scheme or some other mechanism that gives an electrician money as he buys those things, these are powerful signals to tradespeople who will say: 'This will help my business. I better learn how to do this. I better get certified so that I can install the right things.' An incentive mechanism of itself will create demand for training. Whether money from emissions trading, existing TAFE funding or whatever is used to develop the training programs and things, the key thing is that we need the money and the resources to do it and get them up.

Senator ALLISON—We have a Green Plumbers program for training which is an industry based training program. Is there an equivalent for electricians?

Prof. Pears—There is one in the early stages. The National Electrical Contractors Association, NECA, has developed a program and is beginning to roll it out. That is starting. This is the point: we need to create an incentive for tradespeople to train up in these emerging programs. What we do that makes that aspect of their business more attractive to them will be a big factor in motivating them.

CHAIR—Thank you, Professor Pears. There are no further questions. Thank you for your submission.

Committee adjourned at 3.01 pm