LEGISLATIVE ASSEMBLY FOR THE AUSTRALIAN CAPITAL TERRITORY

STANDING COMMITTEE ON CLIMATE CHANGE, ENVIRONMENT AND WATER

(Reference: ACT greenhouse gas reduction targets)

Members:

MS M HUNTER (The Chair)
MS M PORTER (The Deputy Chair)
MR Z SESELJA

TRANSCRIPT OF EVIDENCE

CANBERRA

WEDNESDAY, 4 MARCH 2009

Secretary to the committee:
Dr H Jaireth (Ph: 6205 0137)

By authority of the Legislative Assembly for the Australian Capital Territory

Submissions, answers to questions on notice and other documents relevant to this inquiry that have been authorised for publication by the committee may be obtained from the Committee Office of the Legislative Assembly (Ph: 6205 0127).

WITNESSES

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Amended 21 January 2009

The committee met at 2.02 pm.

SCHANDL, DR HEINZ, Senior Science Leader, Sustainable Ecosystems Division, Social and Economic Sciences Program, CSIRO

THE CHAIR: Good afternoon everyone, and welcome to this public hearing of the Standing Committee on Climate Change, Environment and Water in its inquiry into ACT greenhouse reduction targets. I welcome Dr Schandl, the senior science leader of the CSIRO's sustainable ecosystems. We look forward to hearing your views on what needs to be done to help our territory economy move towards carbon neutrality, or at least a low carbon future. I understand that the secretary has sent you our privilege statement?

Dr Schandl: Yes.

THE CHAIR: Have you had an opportunity to read that card?

Dr Schandl: Yes, I did, and I understand it.

THE CHAIR: I just need to check that you do understand what is on the card.

Dr Schandl: I am prepared to follow the rules, basically. That will be fine.

THE CHAIR: Would you like to make an opening statement?

Dr Schandl: That would be a good starting point, I guess. As you can easily hear, my background is from Europe. I am from Vienna, where I worked for 15 years. I am a sociologist. In CSIRO I am engaged in what we call social systems analysis and sustainable use of natural resources.

I am very grateful for the opportunity to talk to you today. The opening statement will have two parts. I will try to position my research work in regard to the questions you are asking and then I will talk a little bit about the report you have in hand which may have triggered your attention on our work. I will try to be brief so that there is more time for questions afterwards.

THE CHAIR: Thank you.

Dr Schandl: Most of my experience actually comes from working with international organisations such as the OECD, the United Nations Environment Program and the United Nations Economic and Social Commission for Asia and the Pacific, and we are currently preparing a sustainability report for the UN commission.

I understand this is a committee on climate change, but usually the way we think of climate change is as one of the big issues within global environmental change. The other issues are water availability, soil degradation, biodiversity resource depletion and food availability. All these kinds of things are actually issues within global environmental change. So when we talk about climate change, it is only one symptom of what we call in our research an outcome of our unsustainable patterns of production and consumption. When I speak about unsustainability here, we have to

keep in mind that since the 1950s the way that we produce and consume has allowed for a wellbeing to occur around the globe which has never occurred before.

Part of the problem that we experience today, as you well know, comes from the fact that now, on a global scale, almost every human on the earth has similar aspirations to our aspirations. That puts global ecosystems under pressure and it creates global environmental change. So, in a way, we speak about something that is environmentally unsustainable for many reasons, but at the same time it is uneven economically unsustainable, as we have recently seen.

Basically, the analysis tells us that overconsumption was financed by money we did not have in hand. So while consumption is very important for development and economic growth, it is not always very positive for environmental outcomes. And if you overspend, if you overconsume and basically do not have the capacity to do so on large scales, as we can see, the economic system runs into trouble. We may even speak of social unsustainability, if we think of a phenomenon like the even distribution of resources and of wellbeing all over Australia and also over the globe.

So if you find that the current development pathway is unsustainable, what could you then look at? I am telling you nothing surprising when I say that there are three levels where you can intervene. There is the production system, which is usually tackled in terms of eco-efficiency or dematerialisation of production. I can see from your documents—and I would support this—that the ACT does not have a large role to play in this area at the moment, but this might change. I will talk about this a little bit later.

The things that can actually be influenced within the ACT, as you have already found in your own documents, are the areas of infrastructure and consumption. If you look at the scientific state of the art then you will find that 70 to 80 per cent of resource use and emissions are usually linked to three main activities. These are construction and housing, transport and mobility, and food production and nutrition and the way in which they are provided. So these three major activities, in a way, predict 70 to 80 per cent of all resource uses, land use, water use and also emissions.

With respect to infrastructure, I would assume this is where urban governance has a lot of potential. For example, you can think about urban transport systems, urban planning and infrastructure planning. Again, I am saying nothing new; this is all identified in your plans in a certain way. Sustainable consumption is a more difficult area because I would think of consumption as actually not something that is always or fully within the choices of individuals and households; there are actually social determinants and economic determinants to consumption. We can only consume what appears on the shelf, and that is also true for things we are very concerned with, like energy. From the point of view of energy consumption, there are certain chains in how energy is produced and we can hardly interfere in those. If we have brown coal for electricity, for room heating, there is only a certain way in which we can manoeuvre it.

The finding from our research is that we should move away from the individual, from the household, and start to understand movements in social groups and structures, and infrastructures. We should look at the potential for intervening in those rather than

asking for too much from individuals. A very simple example, which I probably should not give, is that I come from Vienna, where public transport is in front of your door. So there is no choice: you just fall into the subway, basically; whereas in Canberra, even if I wanted to, it is very hard to organise transport and mobility without the car, especially when you have kids and shopping.

It is very important, when you think about strategies in the urban context to achieve sustainability, or to find out how you are progressing in regard to sustainability, that you start with very sound concepts, and that you establish reporting systems which are closely linked with conceptual understandings. You need to decide on indicators as to how to measure progress, and when you do this, you should allow for an international benchmarking to occur.

I have read these two reports that are available—*Measuring our progress: Canberra's journey towards sustainability* and *Weathering the change*. The most apparent shortcoming in these two strategies—although I wish to acknowledge it is very good that the city has these strategies—is that the overall concept of what the city wants to achieve does not become clear. What are the reporting systems? How can they be benchmarked against other reporting systems? What are the international comparisons that we compare Canberra against? Which cities are we comparing ourselves with?

If you read the report, and even the data analysis which is behind it, you may think that most of what we see as positive features of Canberra's sustainability outcomes are actually linked to the speciality of the city being a very small capital city with a very educated population. So when we benchmark now against Australia on the average or against larger cities, it becomes very hard to say that this is actually a policy outcome, an outcome of sustainability policies, or of effective governance towards sustainability. It is more about the features of this city as it would anyhow be.

I think there is still some way to go in order to identify the international best practice, the cities we want to compare ourselves with, and to decide which are the things where we have an ability to create change and which are the things where we basically cannot interfere as they are outside our sphere of influence.

Let me also talk very briefly about this report which has been tabled—*Growing the green collar economy*. In this report we tackled a very similar problem from a very different angle. In the report we are asking: if the emissions trading scheme to reduce carbon emissions is put in place and if there were a dematerialisation of the Australian economy—we are looking here at Australia as a nation—what would that mean in terms of employment? We are using two national models to test employment outcomes. There are three main results from the model projections. The first one is that well-designed policies can help the decoupling of economic growth and environmental pressure, so wellbeing can be achieved at much lower environmental pressure. And achieving a rapid transition to sustainability, to a low carbon economy, would have almost no impact on national employment.

As you may know, the basic storyline always is that you can do something for the environment but while you do this you lose jobs. This is not what our modelling said, and we were using both an economic model, the Monash University CGE model, and a physical model, the Australian stocks-and-flows model which we have developed

in-house in CSIRO. So the employment sector will not change under carbon emissions trading, and not even in an economy where we set policy incentives for dematerialisation, which would bring down things like the average living space per family, the energy used per household, the kilometres per car travelled. So when you have very radical assumptions about this, it would not influence employment, and it would also not influence GDP to a high degree. So economic growth and employment would be very similar.

What we are then flagging in this report is that there is an issue around skills. So in an economic situation where you are already skills constrained, where will these new green collar workers, or employees as we call them, come from, and what could government do in order to progress green collar skills?

To close the statement, in order not to bore you all for too long, I would like to say that at the city level there is a lot that can be achieved, especially in a place like Canberra. We have to think a little bit out of the box. In a process of policy sequencing and looking at the low hanging fruits first, of course there is a lot to gain from energy efficient housing. I understand you will hear from a speaker later on who will tell you all the details and potentials for energy savings.

The same might be true for transport in the city, and for mobility in the city. But the modelling we did, in a different context, also showed us that this helps you for a certain period of time but then when the population still grows and when we are still becoming more affluent in a certain sense, these gains are levelled off. So, in a sense, you have to think about more fundamental changes. Just to highlight this, it seems that the international thinking is that this could actually create a competitive advantage for a local economy. If Canberra could be a leading city in solar energy, for example, in alternative energies, and if there could be an industrial park, organised in an industrial symbiosis kind of way, focusing on energy systems and alternative strategies for energy use, that could become an Australian standard and also a global competitive advantage for the city.

I will stop there in order to hear whether you have any questions which I can try to answer.

THE CHAIR: Thank you, Dr Schandl. I can assure you that you were not boring us.

MS PORTER: No, certainly not.

THE CHAIR: That was a fabulous opening statement and very interesting. Just picking up on some of the points you made, when you talked about a place like the ACT and what is giving the greenhouse gases, and where they are coming from, you recognised three things. It is true here that most of our greenhouse gas emissions, something like 72 per cent, are from building-related energy consumption. The second, transport fuels, is 23.5 per cent. You then went on to talk about the area of transport. You gave the example of Vienna, where you more or less fall into the subway and it is there. Canberra is very spread out compared to Vienna, I would suspect.

Dr Schandl: Yes.

THE CHAIR: I have not been to Vienna.

MS PORTER: I have, and it is.

THE CHAIR: Thank you, Mary; you have confirmed it.

MS PORTER: Apart from some bits. There are bits that are way out, aren't there? But they still have transport to those places.

Dr Schandl: Yes.

MS PORTER: They are well connected.

THE CHAIR: Firstly, would you have any advice about how we might be able to move forward to improve our transport system? Secondly, you raised an issue around the importance of being able to benchmark internationally, and also that idea of looking at other cities that are similar in make-up to do that benchmarking. So I have two questions there: first, can you provide any advice about how to improve our transport systems, which I know is a very big one and you may not have a huge amount on that; and, secondly, around that, are there cities across the world that you would see the ACT looking at benchmarking itself against?

Dr Schandl: With respect to the first question, I acknowledge that Australian cities, and especially Canberra, are very different from European cities, in their history, layout and urban planning and design. That creates a totally different mix of use and different ways of commuting in and around the city. In your Canberra plan you have already identified this 7.5-kilometre radius within the city and then a number of corridors where the idea is to achieve greater density.

What the literature tells us is that you cannot say, "Let's wait for the density to occur and then we will put the transport system in place." In the examples I know of, it is usually the other way around. You have to invest in the connectivity and then, as a result, you get the density because people start to acknowledge and accept there is something to gain from the greater density, which is a certain kind of urban lifestyle which is certainly not existing in Canberra. So the cultural underpinning of the Canberra urban lifestyle is totally different from other cities. If you want to turn this around, you start with the infrastructure, with the connectivity, and then you build the density around it. That is what the international examples tell us.

I understand that there may be economic analysis out there which tells you that is actually not economically viable. So that puts you in a difficult situation, almost as if you have to test something which you cannot prove before you do it. I certainly understand that.

I think it is worth imagining how Canberra could become different. What would these corridors look like? Would there be shopfronts? Would people walk there? Would there be a mixture of businesses and where people work and live, where kids go to school and where you can do your shopping? I think there is a potential, in a dialogue with the community, in a kind of visionary approach to imagine those different features of the city. Canberra, in my mind, will never become a completely dense city.

That is not what this city stands for. But there can be certain achievements which the whole Canberra community would then profit from because there would be certain public transport systems and you would start making different decisions.

With respect to the two things I am saying here, first of all, having the community participate in helping scientists and policy makers to understand what would be required to bring about change is very important. The second thing is that it needs investment, even in a situation where you would say it is maybe not viable in the first five to 10 years.

With respect to the second question, as to whom should we benchmark ourselves against, the answer is twofold. In terms of conceptual approach and coherence, there are cities like Vancouver and some European cities. There are also smaller cities. For example, there is an Austrian provincial capital called Graz, in Styria, which is a similar size to Canberra. The city government has a very green approach, as I understand it. So in the sense of comparing yourself with a city of the same size, that could be one idea of benchmarking. They do not have similar density but at least they have similar population sizes. What is possible under these circumstances? It is very similar to Canberra in that I think there is not a lot of industry in this city.

In terms of conceptual concepts, conceptual clarity and coherence, a city like Vancouver, with their policy process around sustainability, would be very good to have a close look at. You may have already looked at this, so I am sorry if I am stating the obvious.

MS PORTER: We have not; I would welcome any opportunity to travel to Vancouver, but then we would be burning or creating greenhouse gases. One of the things that you talked about in your presentation was that we need to move away from the individual and the household in our approach. But one of the things that has happened in the ACT is that there has been a groundswell of enthusiasm, I think, by numbers of community groups, particularly a group called SEE-Change, which is trying to promote that individual responsibility and action at the ground level.

Dr Schandl: Yes.

MS PORTER: I presume you are saying those kinds of things can still continue but they are not the overall solution to the problem?

Dr Schandl: Yes.

MS PORTER: That is a statement, and you might want to comment on that statement. The other question I have is that page 5 of the report mentions the way we consume and the way we travel, which we have just been talking about. We know that in the ACT we consume a lot, because we are a wealthy population, so we tend to buy more than we need and then throw it away, which gives us a problem with our waste, for instance. At that individual level, we do need some campaign to change behaviour. For instance, with transport, we have been having a discussion about taxis, taxis from the airport, and whether people should use the bus because taxis are very unreliable. In fact, we know that people will wait a for a long time for an unreliable taxi because they don't want to travel in a bus because they want to be private. So how do we

change these behaviours of overconsumption, of reliability on the car?

Dr Schandl: First of all, if you are in a situation where you have a lot of grass-roots movement which tries to be more environmental friendly, it is actually good because it helps you in the policy-making processes, as you can clearly see, because there is a certain movement in the electorate which says we should also care about issues like carbon and so on. So that is a good thing.

If we look at these improvements which can be made on a very individual level and we model this through the urban environment or even nationally in Australia, we very soon see the restrictions with respect to really helping. The water-friendly showerheads, the energy-efficient light bulbs and the few people who self-sacrifice and do everything on the bicycle only help so much, and then there is something which you cannot achieve. So even if we all change our behaviours considerably, the overall effect would still not be satisfying because we would still live in houses that are not energy efficient and we would still use electricity as an energy carrier to heat these houses in many circumstances. This energy would still be produced from coal-fired power stations which are not always very efficient and, especially in terms of carbon, are not the best available technology.

What I am trying to say is that we should not rely too much on the choices people are making because sociological research tells us they are not making as many choices as we would wish. In a way, as an individual, as a human being, we want to believe we are deciding everything, but there is a lot we are not deciding. There is a lot which is socially determined.

That creates an opportunity; by changing infrastructures, by changing the options for people, they will move along. You will find that 15, 20 or 30 per cent of your population will always use the car for certain reasons, but then you have the great majority which pick up the things that you offer. I guess that is the other argument I am making here. Very often, you hear, "If only people would change their attitudes and their behaviour, we would be much better off." Actually, all the data analysis tells us that is not true because, first of all, there is no direct relationship between attitudes and behaviours. Behaviours are much more influenced by social determinants and infrastructures.

THE CHAIR: As you were saying before, when you were using the example of a better transport system that would go on certain main lines and so forth, it is about building it and they will come; they will use it, rather than the planning approach that has been taken and which, in fact, looked as though it might even be taken with the new development of Molonglo, which is putting the people in first and then, years later, when they are jumping up and down and saying, "Please provide us with a public bus system," you put it in at that time rather than putting it in right at the beginning.

MS PORTER: No, the bus system is there.

THE CHAIR: It is now, but at one point it was not—and making sure that it is in place. What you are saying is that infrastructure does need to be put in and then there are the attitudes. If the choice or the option is there, people will use it.

Dr Schandl: That tells you something about the scale of intervention. For example, is it better or more beneficial to have the water tank with each household or wouldn't it be better to manage the additional water which comes in on a community scale, like the stormwater harvesting that occurs in ponds in the ACT? As I understand it, there is also a program there. Is it better to give an incentive to households to put solar hot-water in and even a solar electricity panel on the roof or wouldn't there be more to be gained if you organised that on a community scale, on a suburban scale? That is the question here. Both science and policy have to look at it more carefully. I would think, but it might just be my ignorance, this is under-researched and not well understood.

THE CHAIR: In your opening statement you made a quite clear statement, I believe, that reducing our CO_2 emissions does not equal loss of jobs or an economic burden. Could you go into that in a little more detail?

Dr Schandl: Yes, that is actually a very tricky question. I would like to restrict myself to the research we did and explain a little bit about how we did that. If you have a whole economy model in the background, like the Monash University CGE model, which we extended considerably for the energy sector and for the purpose of dealing with the carbon emissions trading system and a different carbon price, or if you have a physical economy model, like the Australian stocks-and-flow model, which is technology based, then you model all the interactions which occur in the economy. So even if you have certain primary sectors which are not winning in terms of employment from a carbon emissions trading scheme, there are a lot of things happening in the whole economy at the same time.

What the modelling then tells us is that we might have job losses in a number of primary sectors but at the same time overall in the economy there is a considerable gain in jobs because of things shifting. That could happen within sectors, with shifts within the energy sector or between sectors, because services are provided in a different way under different economic constraints.

We ran the model, and we found that there would be a considerable increase in overall employment, both under a business-as-usual scenario and under a carbon trading constraint economic scenario. The employment outcomes would not be very different at all in total numbers.

We then looked at those sectors which we usually identify as emissions and resource intensive, like construction, transport and energy. Again, we see that these sectors will grow a lot, in a new policy environment. The construction sector and the transport sector will grow faster in terms of employment than other sectors in the economy. You do this experiment and the modelling exercise and what is different is that you allow in your model for all the interactions to occur in the overall economy. So you are not just looking at some primary sectors and then extrapolating your findings to the whole economy; you allow the model to do all kinds of shifts within your economic system.

MS PORTER: That presupposes that all those people who are going to lose their jobs in that area are going to be employed in that area. Obviously your modelling has taken that into account, but there is the human element of whether a person wants to take

themselves from that and go to that, and having regard to the time of training and the time of unemployment that might occur in between, and a time of paying for a family or of having to move from place to place and live in a different place. How does the modelling take that sort of human element into account?

Dr Schandl: It does not. Neither the economic model nor the biophysical model deal with such things. If you look at the strategies for a green economy or a global green new deal, the UNEP recently framed, or all the green skills programs which have occurred pretty much everywhere, this is seen as having great potential for a better educated, better skilled labour force, so for more decent jobs, as we have today. In regard to the way in which this will be linked to higher income and therefore create a rebound effect for the overall economy, this is a very different question.

Let me give an example which is maybe not a very good example. If you think of a green collar worker as an employee on a construction site who builds a traditional house, the type of house we can buy in Canberra today, if this person builds an energy-efficient and water-efficient house, it obviously would require certain skills which are not available at the moment. But that would not be a big move for the person. The question would be: can the training system, can the education system, quickly enough provide the knowledge and those backgrounds when at the same time we know that usually the education system does not directly react to market forces? This is the last system that actually adapts to changes.

But there is great potential. If we think about innovative strategies—how, for example, construction workers on a construction site can quickly update their knowledge about what you have to do differently in order to have an energy-efficient house, not just at the planning phase but at the stage of sale—that would be great. I can't see a situation where people would say, "I actually don't want to do this."

THE CHAIR: I understand that our CIT and maybe the University of Canberra are responding in some way. Mr Jeff House, who is going to be giving evidence later, might be able to clarify that for us.

Dr Schandl: Yes, in much more detail.

MR SESELJA: I have a couple of questions and you have touched on one of these. You mentioned in your opening statement in relation to the ACT that the areas of infrastructure and consumption were two areas where we could influence things.

Dr Schandl: Yes.

MR SESELJA: You touched briefly on infrastructure with, I suppose, transport infrastructure.

Dr Schandl: Yes.

MR SESELJA: Could you expand on that a little bit in terms of the concepts, other areas of infrastructure, and what you mean by consumption in terms of how that can be influenced? As a separate question, you touched briefly on the industrial park concept. Could you expand on that for us.

Dr Schandl: It almost sounds simple. If you get your private and commercial buildings in good shape so that they are energy and water efficient, and if you then allow for public transport to occur and if you achieve a better urban mix, you basically tackle 40 to 50 per cent of your carbon emissions.

MR SESELJA: When you talk about a better urban mix, are you talking primarily about infill close to the city or small blocks in the suburbs? What kind of urban mix are you talking about?

Dr Schandl: Usually what is referred to in the literature is that when you can achieve it at the places where people work, shop and live, you get less travel time and therefore you have lower emissions. The situation in Canberra, as we all know, is very different. If you want to buy furniture, you have to go to Fyshwick. If you want to shop, you have to go maybe to the Dickson shops, and the kids go somewhere else to kindergarten or school and we work in a different place. So the question would be: could there be a different model and an urban mix where things are provided closer by? A very difficult question is with respect to the transition from the current state to such a different state: how could it occur and what would be the policy environment, the enabling frameworks and the incentives for this to happen? I guess that is the big question here. I think it is something that is not researched for the ACT.

It is the same with the housing stock. There is obviously certain housing stock that the government is responsible for, so it can directly intervene. It becomes a problem of whether the financial capacity is there to upgrade the stock. But for the individual houses, it becomes a different question. So what are the incentives for a builder and for people who buy, reconstruct or refurbish their houses to achieve greater energy efficiency? And where are the supply chains that allow them to do this; where are the workers that can implement the things? This is the package, and this is what I called—maybe unjustifiably so—the low hanging fruits, where we already know that there is an efficiency potential. It is quite considerable; it is actually huge.

For consumption, in the sense of our day-to-day products that we consume, and also the more long-living products that we consume, it is much more difficult. First of all, we are relying on the conditions under which things have been produced. So as a city, as consumers, we have no influence, or almost no influence, on the production process and efficiency.

I was surprised when I looked at your ecological footprint accounting for the city of Canberra that you assumed all the embedded flows, or the indirect flows, related to the consumption of the city are actually carbon relevant for the city. That is not something you usually do immediately because it creates a bit of a disturbed picture. I don't wish to say it is not important to be aware of these transfers which occur; I am just saying this is something which is maybe outside your power to make decisions on and to intervene in.

MR SESELJA: So is there a better way of measuring the carbon footprint of the city? What would you take out of those assumptions to better frame it?

Dr Schandl: Again, let me answer this from a scientific point of view and having

regard to what the research says. Ecological footprint studies are a very good communicative tool because they tell people very quickly and in a very transparent and easy to understand way about an important problem: we are using too many resources and too much space and land. At the same time, as an indicator for the policy process, they are almost not useable. With respect to their information about the ecological footprint of a city or of a nation in a policy sense, what do you do next once you know that? So it is not an indicator that gives enough advice for policy making.

What has emerged in the international debate are so-called satellite accounts which talk about resources, emissions, land use and water use, and they do this in close compatibility with the economic accounts. So whenever you have a money flow, you also have a resource flow and an emissions flow, most of the time. These satellite accounts, because they are constructed almost in parallel with the economic accounts, actually allow you not just to have some headline indicators but also to have a lot of detail so that you can then say which are the sectors which have the greatest emissions, and which are the biggest resource users. What are the policies in place for these sectors and what is the potential to intervene from a city point of view? After all, you are governing a city or a territory, to be fair, but your ability to govern is limited.

MR SESELJA: So to use perhaps a straightforward example, we purchase energy and we get a lot of our energy, virtually all of it, from other sources. We can purchase green energy and we can purchase energy from coal-fired power stations. That is a fairly direct one where we can—

Dr Schandl: Yes.

MR SESELJA: That said, you are talking about further down the supply chain when we purchase food that is packaged somewhere, down the track, which is something that perhaps is far more difficult for us to influence. So you would draw a distinction in that case?

Dr Schandl: Yes.

MR SESELJA: Can you tell us briefly about the industrial park concept that you touched on in your opening statement.

Dr Schandl: In a number of European countries, especially in Denmark, Germany and in some Scandinavian countries, this idea of industrial parks has emerged. Basically, a number of industries are assembled in certain spots and the outputs of one business become the resource input for a downstream business. There is a similar example in Western Australia. The name has disappeared now but I can certainly deliver this information. Basically, you create a business situation where the potential of resources, the reuse, the recycling capacity, is maximised. This is referred to as industrial symbiosis, as if businesses, like ecosystems, would not waste any of the resources or any of the immediate wastes.

What I am saying now is not based on our research but I would still like to make this point in a more speculative sense. If there were incentives for Canberra to really restructure its housing stocks, its energy system, in terms of going to solar and other

alternative energies, there might be potential for businesses to occur in the Canberra region which deliver into these services and produce the kinds of goods you need in a supply chain to have these energy-efficient houses and these different energy systems. That might then create a competitive advantage. So this industry could produce for Australia or even on the international scale.

All of this requires a lot of experimentation and innovation. Usually, as you may know better than I do, things are not viable in their first years. How this problem has been tackled, for example, in the Netherlands is with the concept of what we call strategic niche management. They create business niches for energy-efficient strategies or business strategies in order to grow until they become viable.

The second problem is that, whenever you have a regime in place—for example, the way water is provided in the city or the way energy is provided in the city—usually the regime is not very fond or supportive of the experiments that occur. Again, what has been done in Europe is this idea of strategic niche management, where you create an environment for these businesses so that they can grow to a certain extent and they can then challenge the dominant regime. So you then get shifts in your overall performance.

THE CHAIR: Have you had any interactions with unions or industries in the ACT or nationally in relation to growing the green collar economy? If so, what sort of feedback have you received so far?

Dr Schandl: The surprising answer is no. My team and I did not have any interactions with unions or with business councils. We presented the findings of our study both to a House of Representatives committee and to a Senate hearing, and we briefed a senator. There was a lot of attention from the media, and there still is. But we have not progressed this research, in a way, which is sad to say. The main reason is there has not been substantial funding to do so.

The next question really is: once you see this national result occurring, you want to know what it means on a state level? What does it mean for the major cities? How does it really link to our educational institutions? What are the different kinds of jobs that may occur or that may change? We did not have the opportunity to look into this more closely, although we would have liked to do this. In a sense, we are prepared to do more research but it just has not occurred yet.

MS PORTER: Are you saying that you have not been able to examine whether or not these policies and these approaches should be taken on at a national level and dealt with nationally, with the states and territories engaged in that conversation and as partners in that with the federal government and federal and national businesses, or are you saying that you do not know whether or not it could be done at a state level in isolation from any federal policies?

Dr Schandl: I think I am not saying either. When you read our report *Growing the green collar economy* you will see that once we identify the skills issue, we start talking about key elements that could respond to these skills issues.

MS PORTER: Yes, I noticed that.

Dr Schandl: So we are talking about improved policy settings and information on green skills and training. We talk about supply chains and, in a broader sense, we talk about the culture of innovation in Australia. We try to show at the end of the report how these five elements would be brought together so that they could contribute to what may be called the skills revolution regarding progress of a green economy and making the most of the potential that occurs now under the changing global and national conditions.

But now the detailed problems start. What does it actually mean in a stricter policy sense? Can we create information for a policy that helps us to understand, beyond these broader principles, what would be the policy plans and strategies that could be beneficial so that policy making could be put on a more sound information basis? That requires much more detail than to get the big picture.

THE CHAIR: Dr Schandl, you are talking about that step further, moving further and putting the theory, if you like, into practice and showing how it can be implemented on the ground in a very practical way.

Dr Schandl: Yes.

MS PORTER: It occurred to me when you were talking about having those hubs of industry and all those kinds of things that people move every five or so years and that defeats the purpose.

THE CHAIR: We don't want them to move out of the ACT, do we?

MS PORTER: I know we don't. But they move from Tuggeranong to Belconnen.

THE CHAIR: Mr Seselja, did you have any more questions?

MR SESELJA: No.

THE CHAIR: Ms Porter?

MS PORTER: No. I think it is all very interesting and I hope you get some more funding from somewhere to continue the research.

THE CHAIR: Unfortunately, we do have limited time. I know there are some other questions. Certainly I have some, and others may come from the other committee members. If it is okay with you, we would like to send them to you through the secretariat and give you a few weeks to get the answers back.

Dr Schandl: Sure.

THE CHAIR: Obviously, the more information we have, the better report we can produce, and hopefully look at some of that fundamental change happening in the ACT.

Dr Schandl: Sure. We are happy to provide more information.

THE CHAIR: Thank you very much.

HOUSE, MR JEFFREY, National Government Relations Manager and ACT State Manager, Green Building Council of Australia

THE CHAIR: Welcome, Mr Jeff House. I need to alert you to our privilege card and statement. Have you read the card and do you understand the content of the statement?

Mr House: I do.

THE CHAIR: Thank you. Would you like to make an opening statement?

Mr House: That would be great, thank you. Firstly, can I thank the committee for the opportunity to give evidence and to congratulate the committee on undertaking what I think is a very important inquiry. As Australia's leading green building organisation, the Green Building Council's field of interest in relation to climate change and greenhouse gas reduction targets is, I guess, relatively specific. However, that field of interest happens to relate to the sector that is key to swift, dramatic and cost-effective greenhouse gas reductions—that is, the property sector.

Commercial and residential buildings in Australia account for around 23 per cent of our national emissions, and this is obviously and clearly very significant. What is more significant is that buildings offer the single largest source of greenhouse gas abatement, more than the industry, transport and energy sectors combined. This is according to the United Nations Intergovernmental Panel on Climate Change. This abatement is the most cost-effective abatement of all. Indeed, McKinsey and Company produced a piece of work showing that this abatement comes at negative cost to GDP—that is, abatement in the built environment actually saves the economy money. This is backed up by research conducted by the Centre for International Economics on behalf of the Australian Sustainable Built Environment Council which demonstrates that realising the full abatement potential within the property sector will save the Australian economy around $38 billion annually, each and every year, by 2050.

Not only that, but investing in energy efficiency within the built environment will reduce the price for permits under the carbon pollution reduction scheme by around 14 per cent, which has obvious economy-wide impacts. The same paper concludes that if a range of what we call complementary measures—that is, measures that act complementarily to the operation of the CPRS—are implemented then greenhouse gas savings in the order of 60 megatonnes per annum are achievable by 2030, which represents a 27 to 31 per cent reduction on baseline. Significantly, if these measures are not introduced and the resulting price signal from the CPRS alone is relied upon, only eight megatonnes of abatement is realised by 2030, which is around three to four per cent of baseline.

So the message here is twofold: first, buildings are the key; secondly, the CPRS simply will not achieve reductions in the very sector where emissions are significant and the potential abatement reductions are most easily achieved, meaning that a range of other measures to achieve those reductions are therefore required.

I support setting greenhouse gas reduction targets. They provide an invaluable focus

for government and the wider community. Their more subtle value is that they represent the aspiration and hope of a community, whether it be local or global, that this challenge can be met and the unthinkable results of catastrophic climate change will not come to pass. But any target needs to be based on science and be able to be directly linked to maintaining concentrations of greenhouse gases in the atmosphere at or below the magic number of 450 parts per million. All targets need to be set with that single objective in mind.

In the ACT, our emissions profile is made up principally of stationary energy and transport. We have no significant power generation within our borders and therefore our reductions cannot come from source generation. Our reductions in contribution to the national and global effort will therefore come from transport and stationary energy. I believe that the options for significant reductions in transport are somewhat limited in the short to medium term. Indeed, electric cars will perhaps do more to reduce our emissions from transport in the ACT than anything that the ACT government can reasonably and cost effectively do.

That leaves stationary energy, and this is the area where real gains can be made through energy efficiency. Targets, important as they are, are only as good as the programs, policies and delivery mechanisms in place to achieve them. *Weathering the change* is a pretty good document, both in terms of providing a broad framework and also in terms of the specific areas that it identifies where action needs to be taken. But it is certainly time to start ticking off some of the boxes contained in that strategy.

There certainly has been some progress. The feed-in scheme, for example, is a very positive measure, and one that the GBCA supports. I would like to congratulate Mr Gentleman on his work and vision on that program, which only came to fruition some two weeks ago. It is timely to note that the reason why Germany has such an advanced and prosperous solar industry is as a result of their own feed-in scheme, which was generous enough to act as an industry development mechanism—something which the ACT could certainly learn from.

But much more needs to be done, and some measures are complex and will certainly take time. There is, however, considerable low hanging fruit, and the ACT government can take immediate and effective action on a number of measures ranging from regulation and encouragement to government leadership. The effort needs to be whole-of-government, and in that respect the creation of the Department of Environment, Climate Change, Energy and Water is a very positive step, and I note that David Papps, formerly of the Victorian Department of Sustainability and Environment, has just been appointed as CEO. Victoria is a leader in this field, and I would like to congratulate Mr Papps and Minister Corbell on that appointment.

The department needs to be appropriately funded in order not just to develop policy but to act as a delivery agent for the programs that are necessary to achieve the reductions sought. It needs to engage with industry, particularly with electricity retailers, to ensure the effort is joint and that some of the regulatory and other barriers to energy efficiency are identified early and dealt with. In that context I would recommend that members look at the London Climate Change Agency and the fantastic results being achieved there. It is a model we would do well to emulate.

To return to the specific issue of measures, there are a range of actions that can be taken now; indeed some of them are already identified in *Weathering the change*. For example, action 2 calls for carbon neutrality in government buildings. This is a good objective, but currently the ACT government does not even have an accommodation policy that dictates that only green buildings will be occupied by government employees. I understand this is being worked on, but the ACT is one of the very few governments that do not have such a policy, which is even stranger when you consider we have the largest concentration of green buildings in any capital city.

Action 19 involves pursuing energy efficiency ratings for all buildings, which again is commendable, but measures need to be in place to ensure that building owners are encouraged to improve the performance of their buildings so that these ratings can be achieved. Action 7 involves differential stamp duty for low emission or green vehicles, a measure that has been implemented. But why would differential stamp duty not be extended to green and energy efficient buildings?

I have just come from our national conference, Green Cities, held in Brisbane, where Queensland Premier Anna Bligh spoke and released a suite of policies, including fast-tracking new eco-friendly developments through the DA process by appointing dedicated case managers and granting ministers the power to require faster decisions on quality green developments, a policy known as Green Door; requiring all new houses and major innovations to meet six-star or equivalent energy efficiency standards by 2010—a policy in line with the Council of Australian Governments' approach to adopting a minimum six-star standard nationally. Queensland is now the first jurisdiction to sign up to that approach.

I refer also to the "ban the banners" policy, which prohibits body corporates and developers from banning energy-efficient building materials such as solar hot water; requiring all new units and office buildings to provide electricity sub-metering; requiring end-of-trip facilities for cyclists and joggers in all new major developments around key activity centres in Queensland; and establishing a green building skills fund to create 3,000 green training places, allowing workers in the industry access to accredited training courses such as those offered by the Green Building Council of Australia.

This is just one policy announcement from two days ago, with huge policy and positive impacts. It is not rocket science and it is not particularly difficult; it is just a matter of taking action. In the context of an issue which has broad bipartisan political support, unprecedented community consensus and industry buy-in, it is very difficult to identify any reason for any inaction here in the ACT, or indeed anywhere in Australia.

To conclude, there is no one single magic bullet for climate change and reducing greenhouse gases, but nor is the task necessarily complex. The scope of the challenge may be intimidating but the results of inaction are even more so. Fortunately, the solutions do exist. We do not have to invent them or start from scratch. And they can be implemented. Having lived in the ACT for more than 20 years, and around half of that time working in this place, and knowing the city as I do, I believe Canberra is very well positioned, better than most, to be a leader in this area. It just takes the leadership necessary to act. Thank you.

THE CHAIR: Thank you, Mr House.

MR SESELJA: I want to go through some of these ratings that we have. One of the things that are often put to me by constituents is that we have these houses that have five-star energy ratings. They have got black roofs, they have got no eaves and they seem to have the air conditioning on a lot. Can you comment on the validity of some of the current rating system and how that can be improved to make it somewhat more environmentally friendly?

Mr House: Are you talking about the current rating system that applies here in the ACT or just generally?

MR SESELJA: Generally in the ACT.

Mr House: I think the credibility of various rating schemes in this country is something that is an emerging issue. One of the unique roles that government can play in this area is to provide some level of confidence to the market that the rating schemes that are out there actually do what they say they do. There is probably an opportunity for government to provide a level of accreditation similar to—I tend to use the Heart Foundation but it is less and less wise to use that particular standard because it can be misused. There are few roles the government can play in rating schemes—certainly not developing them and certainly not managing them. But the unique role they have is to accredit them. I think that is something that the marketplace would be happy to see.

The rating schemes that are out there, by and large, are generally good. They do what they say they do. I think there are issues about the marketplace knowing what each rating scheme does, but more and more the market will fill the niches that are developing and new rating schemes will be generated. I know CSIRO is working on one in conjunction with the ACT government, with East Lake. So these will continually be brought onto the market. As more and more do, I think there is going to be a more pressing need for there to be some form of confidence provided to the market that the schemes do what they say they do.

THE CHAIR: As you say, accreditation, because as work develops then some of those rating schemes may become obsolete.

Mr House: Indeed, yes. Certainly, speaking for the GBCA, we refine our rating system on an ongoing basis, and that is simply to maintain best practice as the market itself develops. So that is just a simple commercial decision on our part reflecting the fact that we still want to provide these rating schemes. So a rating scheme that is four years old certainly will be uncompetitive but not necessarily redundant, if I can put it in those terms, in the market. The market has no real way of knowing which schemes are more appropriate and which schemes are not.

THE CHAIR: Is there an argument to say that we should have one scheme that is consistent so that, as you say, it provides some certainty for business, it is based on best practice and so on? It would be updated as you go along but at the moment you can just decide which one fits what you are trying to do. You would be hoping that

people are always trying to do the best but it may also fit more to your budget than, say, environmental outcomes.

Mr House: I think it is a good thing that there are multiple schemes out there. There are some which are very broad based but there are others which are very focused on a specific outcome. I think it is appropriate that the market has a choice in schemes, if for no other reason than competition means that the schemes will maintain their credibility. If we started again in the days when there were no schemes, one scheme would probably be useful for the first five to 10 years, but as the marketplace becomes more knowledgeable, as green buildings, for example, become more complex, there are going to be, unavoidably, opportunities for a niche tool to be developed. I do not think that is something which should be discouraged.

MR SESELJA: You talked about the ACT having the highest number of green star rated buildings.

Mr House: Largest concentration per capita.

MR SESELJA: Largest concentration, yes. What are those approximate numbers? You are talking about the commercial sector, obviously, with green star buildings. What is the proportion in the ACT and how does that compare nationally?

Mr House: There are about 35 to 40 buildings certified green star in the ACT. On a per capita basis we have something like 40 per cent more green buildings per head of population.

MR SESELJA: How many of those are commonwealth occupied?

Mr House: Most of them. That is the reason why we have the largest concentrations because the commonwealth does have, and has had for a long time, that accommodation policy, which has been one of the major factors in the spread of green buildings generally, whether it is green star neighbours or environmentally friendly buildings. It is an important element in not just demonstrating government leadership and commitment but ensuring that the market also moves along.

MR SESELJA: What is the approximate cost differential on a square metre? Obviously, there is a reason why the commonwealth is choosing it and the private sector is not as much. Presumably it is cost. What is the cost differential?

Mr House: It is not true to say that the private sector is not choosing it as much. It just happens to be a fact of life, particularly in Canberra, that the government, given a whole range of other policy objectives that they have, choose to express that via their accommodation policies. In terms of cost differential, it varies. There is a premium to be paid in capital costs for the construction of a green building. That is coming down as the cost of technology is reduced, but no one figure is more accurate than the other. I think it is in the realm of single digits.

You hear three to four per cent, up to seven per cent. But the difference between a green building and a non-green building over the life of that asset is that it costs less to run, significantly less to run, in terms of utilities, and as the price of those increases

obviously there is a benefit. Also, in terms of productivity, we see work that says that employees in green buildings are more productive. If you are a large firm with many employees—10,000 employees—a productivity increase of two per cent is massive.

If you take all the costs and benefits of a green building over the life of the asset, they stack up. And more importantly than that, and this is what the private sector is most focused on, more than the public sector, you do not build a commercial building of any significant size anymore that is not green. The building will last for between 20 and 50 years, for example, and that building will be obsolete the day it is opened. Daniel Grollo from Grocon puts it best. He says, "If you're building a non-green building, you're building in obsolescence." And that is the major factor in why the private sector is taking it up. It is not just an environmental thing anymore; it is an economic benefit to build green.

MR SESELJA: Does the ACT government occupy any of these green star rated buildings in the ACT?

Mr House: Not to my knowledge. They are improving some of their sites. I think Macarthur House is one; I think ACTPLA have done some work in Fyshwick. That is good work, and I know the government is working on an accommodation policy. There is a commitment, if and when the ACT government building is built, that it will be at least five stars. There is a commitment to that. So the commitment is there but that other policy really helps, too.

MS PORTER: What kind of approach should we be taking as far as our own government is concerned and also for private individuals, say, in residential accommodation? Do we take an incentive approach or do we take a stick approach? For instance, this building, as you well know from working in it, is a dreadful building.

Mr House: Yes.

MS PORTER: So it would not be a matter of asking how we sell that to the public because they do not want us to have a bigger building, for starters. There is some selling of the idea of actually tearing down buildings that you cannot retrofit because they cost so much money to retrofit, the actual components that they are made of are not healthy in the first place and they are not conducive to good work practice. And people live in houses that are of the same nature. So do you say to people, "Don't renovate that house, don't spend thousands and thousands trying to renovate it, just knock it down and start again"? What kind of approach do we take?

Mr House: In terms of carrot and stick, it has got to be a combination of both. It is incentives, it is regulation and it is government leadership. There is certainly detail about each of those three elements that we can go into, if the committee wishes. In terms of that broader issue of "knock it down or refurbish", knocking a building down is certainly not the first preference but there are absolutely buildings that you cannot retrofit, either cost effectively or at all, that would give a significant environmental benefit to justify the effort. But we do knock buildings down and our rating tool certainly requires that the materials be recycled.

In fact, there is a project in Sydney which is a very large precinct-level redevelopment

where they are achieving ninety-something per cent recycled materials. We give points within our tool for the use of recycled material. Trevor Pearcey House in the ACT, for example, is Canberra's first six-star green building. They have 40 to 50 per cent recycled material in that building. So knocking down a building is not the preference because there is embedded carbon and energy in that material, but you can do it nowadays and not throw away significant amounts to landfill. So it can be done. The challenge, or the barrier to that, is not so much environmental; it is more economic.

THE CHAIR: Mr House, I wanted to ask a question around the green star tool. Will the green star rating tool co-exist with the commonwealth's use of the NABERS rating tool and its mandatory disclosure of commercial office building energy efficiency?

Mr House: Yes is the short answer. NABERS is, as you would know, largely a performance or operational tool whereas green star is principally a design tool. Currently, the mandatory disclosure proposal only cites NABERS as a tool that can be used to meet the requirements within that proposal. We are currently looking at developing a tool which will have an operational or performance element to it which we think can be used for that particular proposal as well as allowing the federal government to refer to green star as they do to NABERS in their green leases.

So we recognise that there is an opportunity there, and green star goes certainly well beyond NABERS in terms of the measures and categories of environmental performance and sustainability measures than does NABERS. It is not to say that one is better than the other; they are just two different tools for two different purposes. But we are looking to provide something which can be used for the purposes of mandatory disclosure, should it be passed, and other pieces of policy that the government has.

THE CHAIR: I wanted also to check if the Green Building Council support the national framework for energy efficiency and whether there should be additional territory initiatives.

Mr House: Yes, we do. We support NFEE and the soon-to-be released national strategy for energy efficiency. In terms of additional measures that the ACT could introduce, they would be in the category of more complementary measures to what COAG is doing with NFEE and NSEE. They would be things like a green building fund for the ACT which would be complementary to that broad-brush sort of regulatory approach. I do not think there is an opportunity for the ACT to mimic what is happening at the federal level, but certainly there is an opportunity to provide some of those other measures which assist in the achieving of, and the meeting of, the standards and approach from the federal government.

THE CHAIR: I am pleased that you answered one of my questions, which was whether you actually thought the commonwealth green building fund was effective and whether there needed to be a complementary territory program.

Mr House: Absolutely. In fact, I understand the green building fund is fully subscribed. So they have got enough applications to hand out the first round of money. This is a program which was not really advertised. They had no money for program

delivery; it was just the money that was given to them to hand out. So for a program that was not advertised in any way, and for the market to respond like that, demonstrates the support for measures like that.

We have been talking to a couple of local ACT departments about replicating the GBF in an ACT sense. We would absolutely support that and I think it would be very valuable, because you can attach a carbon reduction to that fund. You can say, "From these projects, this is what we saved." That is remarkable. There are not many measures that can do that.

THE CHAIR: And do you feel that has been received favourably? There is a positive response?

Mr House: I think so. It is always hard to tell when you are asking for money to be spent, but indications from public statements and the general government attitude and the attitude of this Assembly would give it a pretty good shot.

MS PORTER: When you were making your opening statement you said you thought Weathering the Change and the other policies were all good policies but you felt we should be ticking more of the boxes. In the previous presentation, I think you were probably here and heard the comment from the witness that he felt that that is all well and good and he did not say the policy statements were not good statements, but he believed that unless we benchmarked it against a city of a comparable size and/or nature, once we achieved that thing we could not benchmark it against anyone, so we could not really say whether we are achieving best practice in that area. Do you have any comments to make about his statement? I am sorry he has left because I wanted him to hear your response to that.

Mr House: I might be glad he has left! Some of the objectives in that report lend themselves to benchmarks; others not necessarily so. For the measures that relate to a reduction in greenhouse gases, I do not think we necessarily need to benchmark against comparable cities. I think it is just a case of saying, "Our baseline is this, we need to reduce it to this." I do not think that should have anything to do with what Auckland is doing or a city the same size as Canberra. It has got everything to do with what our target is, how we meet that target and, from the sectors that operate this economy, what contribution each of them needs to make to reach that goal.

There are others where I think benchmarking against comparable cities is probably a good thing, if only to improve our performance. This document here is our green government guide, which lists all the policies relating to the built environment across Australia—federal, state and local. There are measures in there which we absolutely should be doing. I think benchmarking against the leaders—Victoria and Queensland, Brisbane City Council—absolutely would be a valuable process for us. For example, Brisbane City Council has a program where they have got $12½ million, where they just give a cash reward, if you like, to people who build green.

MS PORTER: So that is one of the incentives that you were talking about?

Mr House: Yes. Benchmarking is valuable beyond just numerical benchmarking. Benchmarking is more valuable when it is about benchmarking policies as opposed to

necessarily just standards. I think benchmarking is valuable in some of those measures; in others I think that comparing or benchmarking ourselves against another city would not provide much value.

THE CHAIR: On that issue, is the Green Building Council satisfied with the operation of the national greenhouse and energy reporting system for collecting data about greenhouse gas emissions for baseline purposes and for future monitoring and reporting purposes? If not, what might be done to improve it locally or nationally?

Mr House: I think it is a good start, but the proof in some way will be in the pudding with that. In terms of measures that could improve it, I could not name anything specific; suffice to say though that it needs to be as widespread as possible, it needs to cover the sectors that are most important in terms of greenhouse gas reduction and it needs to be something that is easily measurable year upon year. I think the jury is still out with NABERS but we do support it. As I said, we think it is a good start, but I do not think we are in a position at the moment to say whether it has succeeded or failed and therefore what measures could be applied to improve it. I am sorry that I could not be more helpful there.

THE CHAIR: I want to go to a question about waste and recycling that you were talking about before, unless members have a question relating to the current issue being discussed.

MR SESELJA: I have got questions around policy settings in terms of emissions, so I am happy to come back to that.

THE CHAIR: Okay, we will do that next. You gave an example of a green building here in the ACT that had a significant amount of recycled products within the building. Does the Green Building Council support legislation creating extended producer responsibility—that is, laws that require companies to take back products at the end of their useful life? Touching on recycled building materials and the opportunities in the use of recycled building materials that commercial builders in the ACT have been missing, how much are we missing out on in that regard? You have given us one example where it is has been used, but could we be doing better? Have you got some suggestions? Also, there is that issue around the extent of producer responsibility which is coming up. It is a big part of the discussions around waste these days.

Mr House: We do not have a formal position on end-use responsibility; suffice to say that what we tend to do through our tool is to encourage the use of materials and products that, in a way, do not have an end of life. When they do reach the end of their current use, if you like, they can be reused in some other way. In terms of producers of products being responsible for having them returned, if that was tied to encouraging them to not simply, once they get it back, get rid of it but to actually somehow remanufacture, through that material, something which is again useful, that would be absolutely fantastic.

In terms of opportunities to increase reuse and to recycle materials, it perhaps is one that could fall into the regulatory approach. Certainly, where our tool is used, reuse of materials and recycled materials is increased dramatically. It is one of those outcomes which could be quite simply achieved through regulation. The political ins and outs of

that are a completely separate thing, but in terms of how it could be practically achieved, regulation would do that.

MS PORTER: If you could stop them dumping illegally, that would be a very good idea.

Mr House: Indeed, that is right.

MS PORTER: For starters, we do already have a building recycling facility at both tips, so they can take it there and it can be divided up into the various components and reused.

Mr House: Yes.

MS PORTER: But what happens currently is that it is illegally dumped, not by the builders themselves but by the people who transport the end product on behalf of them.

Mr House: They do not do the right thing, yes.

MS PORTER: This is one of our challenges, because we have the regulation.

Mr House: That is where you pull out the big stick.

MS PORTER: Yes.

MR SESELJA: You talked in your opening statement about the major contribution that the property sector could make to cutting emissions in Australia, and that is very true of the ACT. What are some of the key policy changes that would be needed to help bring that about?

Mr House: I think the major opportunity rests with existing buildings. Pretty much all new buildings that are built now are built to a green standard, so the challenge is in existing buildings. The trick there is to encourage retrofits and refurbishment of existing buildings.

MR SESELJA: Are you talking about the commercial and residential now?

Mr House: Yes, absolutely. Our focus is on commercial, but there is no reason why the same principle cannot apply to both. So it is retrofit and refurbishment. To achieve that, there has to be a combination of incentive and regulation. I think the commonwealth certainly, for residential, will take care of, to some degree, residential and there are policies that have been in place for a while in the ACT that do that as well—the HEAT program et cetera. For commercial, there are incentives like the green building fund, rate reductions and stamp duty reductions for green buildings, land tax abatement for green buildings. With respect to the change-of-use charge, the ACT is the only one that charges change of use. Abolishing change of use for redevelopments from brown to green, you would do that one tomorrow.

So the incentives have to be there, but also there is a role for regulation. The

government also needs to demonstrate its commitment to these sorts of approaches, and that means you get the accommodation policy, and that every new school that is built, and every new public building, is built to an environmental standard. With respect to the money that the ACT is receiving from the commonwealth as part of the stimulus package, every building that is built from that should be built to an environmental standard. So it is a combined approach of regulation and incentives, but it is all to encourage that retrofit and refurbishment which will give you that significant carbon saving from that batch of existing buildings, which is about 95 to 98 per cent of all buildings.

We could have every new building that is built between now and 2050 built to the highest environmental standard that exists, but that will not give you the carbon reductions and greenhouse gas reductions that need to be achieved to meet any sort of target in the ACT or nationally. So the existing building component is vital.

THE CHAIR: Your view, Mr House, would be that at the moment we are missing opportunities around retrofitting that we could be doing more to encourage?

Mr House: Yes. We absolutely could be doing more.

THE CHAIR: And in fact we need to? As you said, if we are going to make the cuts that we need to make, we have to look at the existing stock, not just at future stock?

Mr House: It is a cascading line of responsibilities. If you first agree that buildings are the significant factor in reducing greenhouse gases, in the ACT, where there are limited other opportunities for reducing our greenhouse gases, then buildings are it. So when you are talking about buildings, new is pretty much being done, so it has got to be existing. That is where the focus has to be, and absolutely we could be doing more. There are things that we could have been doing yesterday and there are things which will take more time, not only to introduce but to see the impacts and results of those measures. But, yes, we absolutely can be doing more. The ACT sits probably roughly in the middle of jurisdictions in terms of its performance on measures for the built environment. We are hoping for, at least in this particular Assembly, an exponential increase in those measures and performance, but we need to be doing more.

MR SESELJA: Who are the best jurisdictions and what are they doing differently from the ACT?

Mr House: Victoria and Queensland probably are the two highest performing jurisdictions. Queensland have been going ahead in leaps and bounds in recent years. What is interesting is that these jurisdictions have not necessarily done it just on the basis of environmental considerations but they recognise the tremendous jobs component of going down this path. With Queensland, as we know, you do not stand between Queensland and a job, and that is why they are doing it. We certainly applaud that.

In terms of what they have done differently, it is a combination of getting started earlier and progressively improving their performance. In the ACT we had a good initial burst and I think there was probably not a hell of a lot of progress from that

point on. I think there is now a newfound focus and interest, and the CPRS will probably bring about a lot more activity. But we are a little bit slow at the moment.

THE CHAIR: Obviously, along with jobs, it sort of goes hand-in-hand with training and mentoring in this area. Your council has lodged a submission with the Senate inquiry into the effects of climate change on training and employment needs.

Mr House: We did.

THE CHAIR: You have called for a range of new training programs for growing the green collar workforce. Has your council had any success in its advocacy for green skills training, including its suggested national green mentoring program to help smaller enterprises and sole traders, and would the territory be an appropriate place to pilot a program like that? I wanted to get your thoughts on those matters.

Mr House: In terms of advocacy success, we do not have the program yet. I guess the response we get is that they recognise the value of such a program but we do not have it yet and I am not sure that it will be on the books in the near term. Certainly, the government federally is very engaged on the skills issue, particularly in the green collar sector. With respect to the specific measures that it comes out with, it is a little bit of a different matter. There is absolutely no shortage of information and suggestions that have been provided to it. We have worked with the ACF and the ACTU on their efforts. So I think it would be unfair to characterise it as the government not being prepared to act; I just have no idea what it is going to do and when it is going to do it. We find that a lot of its focus and attention in this sector is taken up with emissions trading. Unfortunately, that is so complex that it does not leave room for much else.

THE CHAIR: My understanding is that there will be a climate change ministers COAG that will be coming up in around March. I am pretty sure it is at the beginning—

Mr House: Certainly, COAG is meeting in March. I understand that at that meeting—

THE CHAIR: There is a focus on climate change?

Mr House: Absolutely. That is where the six-star energy efficiency minimum for houses will be agreed, we hope, so that will be a big meeting.

THE CHAIR: But you are not aware whether the training and skills development and the mentoring that is quite essential will also be on that agenda?

Mr House: I am not aware, no.

THE CHAIR: My guess would be that without those things going on, that is really an impairment to us growing a green economy. So these things need to develop together in order to make it viable and a goer.

Mr House: That is the thing. Industry development theory works just as well for the green sector in its broader sense as it does for any other sector. That is why we had a

financial services boom as a result of compulsory superannuation. These things work. But for some reason the green sector is not seen in the same sort of terms yet. We are getting there.

THE CHAIR: Can you comment on education for sustainability outcomes being delivered by the University of Canberra, the Canberra Institute of Technology and/or the ANU, and is enough being done fast enough in those areas?

Mr House: I am not familiar with those programs.

THE CHAIR: We will be visiting the CIT, so we are going to have a look at some of their sustainability programs.

MS PORTER: With respect to the economic stimulus package, the last one that came from the federal government, do you want to comment on whether you felt that that was tied enough to incentives to use that? Most of it is around infrastructure, isn't it?

Mr House: Yes.

MS PORTER: Is it tied in enough to the policy framework that you are advocating, or do you feel that the federal government could have done a little bit more in that area?

Mr House: Notwithstanding the home insulation package, the stimulus package as a whole was pretty bereft of any green initiatives. At least the original package that was proposed was certainly that way. Through the work of the Greens and a lot of organisations like ours and ACF et cetera, we managed to extract some level of commitment or requirement from the federal government to the states to pay attention to sustainability while this money is being spent. How hard and fast that requirement is has yet to be seen. Certainly, the states are in a rush to get the money out of the door. I understand that in South Australia, for example, off-the-shelf designs are being given to builders, saying, "Just go and build that." These designs have no sustainability aspects to them at all, so more could have and should have been done; absolutely. It is a little bit perplexing to me that both state and federal governments have fairly robust policies about sustainability in the property sector and they were not applied with this stimulus package. We hope that the states, in spending the money, do take note of their own policy objectives in how that money is spent.

MS PORTER: So it is up to us here to actually make sure that we are pushing that?

Mr House: The states are the ones that spend the money.

MS PORTER: Yes.

Mr House: It will be the ACT department of education, for example, that will be tendering out for projects that get built here. Sandra Lambert will have responsibility for that sort of stuff. So it is on the shoulders of the states to keep in mind sustainability when they spend this money because you are just throwing away money if you are going to build unsustainably because of those issues that we talked about before. It costs less to run a green school than it does a non-green school, or multiunit

housing, which is the other section of the stimulus package that the ACT have got money for. So it is up to the ACT and the states to do it properly. That does not mean you do it slowly. I know there is a rush to do it. You can still do it quickly and do it properly.

THE CHAIR: It does not necessarily mean throwing out all the laws, policies and regulations around it, does it? It is about, as you say, good, targeted investment as part of this as well.

Mr House: Absolutely, and particularly in a sector where builders are now used to building green. If you give a builder nowadays a design which is in no way green, they will look it and go, "I don't know how to do that anymore." I am sure that is not what they will say when they get that design but—

MS PORTER: So that is what is happening in South Australia?

Mr House: Yes. I do not know what is happening in other states, but certainly anecdotally, having regard to the speed at which this money needs to be spent, everything is being sort of thrown out.

THE CHAIR: Certainly, the fact is that South Australia and New South Wales seem to have no rules at all, and that was apparently seen as a good thing, which I think some of us had a different view on. Just to go to sustainable transport, there is a connection here, too, if we are looking at a sustainable city. Is the building sector working with the sustainable transport planners and operators to encourage that modal shift to transportation and what more could be done?

Mr House: Certainly, a lot of the NGOs that inhabit both fields, the property sector and the transport sector, clearly recognise that they go together when it comes to improving the environmental performance of the built form and the transport that sits within and between it. ASBEC, for example, is undertaking a study which looks at cities. It is based on transport modelling combined with the relatively new methods of designing sustainable cities in terms of its built form. So we are now seeing good work done on combining improvements in building sustainably with improvements in designing transport sustainably. I note the previous witness's discussion about those hubs, and it is absolutely all about that; it is about making transport time—not so much distance but time—shorter. If you are sitting in your car and you have just got a kilometre to go, you are still emitting, so it is about time as well as distance.

MS PORTER: The traffic flows.

Mr House: Yes, absolutely. I think they are picking two cities, and this work is based on traffic flow models, but tacking on that other element, to essentially design sustainable cities and precincts. There is a lot of work going on, certainly at the precinct level, around the country.

MR SESELJA: You mentioned the leadership role of government. We touched on the fact that this building is not particularly green. You spent a lot of time—

Mr House: Is it still leaking upstairs?

MS PORTER: They fixed that.

MR SESELJA: You spend a lot of time in this building in your role as well. What would be some simple things that would make this old, poorly designed from an environmental perspective, building more environmentally friendly?

Mr House: For old buildings, about 40 per cent of the improvement in efficiency can be achieved in just how a building is operated. It is not necessarily that you add a bit of kit here and change the paint or the lighting; it is about how you operate the building. Some buildings are so old that you just cannot operate them in a way that is going to improve their efficiency. But where a building has large HVAC systems, for example, it is just making sure—

MS PORTER: Large what?

Mr House: Sorry, heating and cooling, ventilation. It is making sure that the building manager knows how to operate that piece of equipment. In terms of the other things that you can do, and not knowing the building intimately behind the walls, I do not know what the thermal quality of the windows is, but from memory it is not very good.

MR SESELJA: That is a safe bet.

Mr House: Yes, so we have these big window facades, which just puts pressure on the air conditioning.

MS PORTER: Which is an old system.

Mr House: Yes, which is an old system in an old building. This building was redesigned to have the chamber put in. The chamber may well be the most environmentally sustainable part of the building, but it is still not that crash hot. But the measures to improve existing buildings are not necessarily expensive and, as I say, most of the gain can be just in how you run the building. But swapping round the HVAC system and doing something with the windows will get you 60 per cent. So it is pretty simple.

THE CHAIR: Awnings in strategic places.

Mr House: Yes, exactly. The way that the sun comes in, it is hot and then it is cold; it is hot and then it is cold, as you all know. A lot of it for this particular building is poor design, but it is a very old building and they did not think about these things back then. In terms of your point about the community not wanting to have money spent on a new building, I think the sell job is relatively simple: the new building over its lifetime will save a lot of money, to say nothing about the improvement in emissions. The community is, on these areas at least, very ready to see those sorts of things. Yes, this is a parliament and obviously that is a little bit different from any other government building, but I think it would be an expression of the community's desire as much as an expression of the government's desire, and the Assembly's desire as a whole, to sit in a comfortable, environmentally friendly building. You would all be more productive; there you go.

MS PORTER: Yes, exactly.

THE CHAIR: I would certainly support having the air con not so cold in the chamber. Apparently it has to be at that level because the men have to wear jackets and we would not like them to get uncomfortable. I think some old-fashioned ways of working like that maybe need to have a little bit of an update into the 21st century.

Mr House: I thought it was to keep some previous members awake.

MS PORTER: Yes, it may be an urban myth, the business about the suits.

THE CHAIR: Are there any more questions from the committee? If not, thank you very much. It has been a fascinating and very useful session this afternoon. There may be some questions that we want to send through to you, if that is okay?

Mr House: Absolutely.

THE CHAIR: We will do that through the secretariat. Thank you very much for coming along this afternoon.

Mr House: Thanks for the opportunity.

The committee adjourned at 3.53 pm.