



**Cynulliad Cenedlaethol Cymru
The National Assembly for Wales**

**Y Pwyllgor Cynaliadwyedd
The Sustainability Committee**

**Dyd Iau, 4 Hydref 2007
Thursday, 4 October 2007**

Cynnwys
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cynhwysir cyfieithiad Saesneg o gyfraniadau yn y Gymraeg.

These proceedings are reported in the language in which they were spoken in the committee.
In addition, an English translation of Welsh speeches is included.

Aelodau'r pwyllgor yn bresennol
Committee members in attendance

Lorraine Barrett	Llafur Labour
Mick Bates	Democratiaid Rhyddfrydol Cymru (Cadeirydd y Pwyllgor) Welsh Liberal Democrats (Committee Chair)
Alun Davies	Llafur Labour
Lesley Griffiths	Llafur Labour
Alun Ffred Jones	Plaid Cymru The Party of Wales
Darren Millar	Ceidwadwyr Cymreig Welsh Conservatives
Karen Sinclair	Llafur Labour
Brynle Williams	Ceidwadwyr Cymreig Welsh Conservatives
Leanne Wood	Plaid Cymru The Party of Wales

Eraill yn bresennol
Others in attendance

Mike Batt	Rheolwr yr Ymddiriedolaeth Garbon yng Nghymru Manager, the Carbon Trust in Wales
Russell Davey	Uwch Gydgysylltydd Prosiect, yr Ymddiriedolaeth Garbon yng Nghymru Senior Project Co-ordinator, the Carbon Trust in Wales
Peter Davies	Comisiynydd Cymru, y Comisiwn Datblygu Cynaliadwy Commissioner for Wales, Sustainable Development Commission
Helen Northmore	Pennaeth Ymddiriedolaeth Arbed Ynni Cymru Head of the Energy Saving Trust Wales
Sarah Samuel	Arweinydd Tîm, Ynni a Newid yn yr Hinsawdd, y Comisiwn Datblygu Cynaliadwy Team Leader, Energy and Climate Change, Sustainable Development Commission
Dr Roger Wade	Cynghorydd Gwastraff a PARCH, Asiantaeth yr Amgylchedd Cymru Waste and PARCH Adviser, Environment Agency Wales
Peter Wilkinson	Arbenigwr Gwastraff a PARCH, Asiantaeth yr Amgylchedd Cymru Waste and PARCH Technical Specialist, Environment Agency Wales

Swyddogion Gwasanaeth Seneddol y Cynulliad yn bresennol
Assembly Parliamentary Service officials in attendance

Joanne Clinton	Dirprwy Glerc Deputy Clerk
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Dr Virginia Hawkins

Clerc
Clerk

*Dechreuodd y cyfarfod am 9.33 a.m.
The meeting began at 9.33 a.m.*

**Cyflwyniad, Ymddiheuriadau, Dirprwyon a Datgan Buddiannau
Introduction, Apologies, Substitutions and Declarations of Interest**

[1] **Mick Bates:** Good morning and welcome to this meeting of the Sustainability Committee. I have a few housekeeping announcements that I need to make. In the event of a fire alarm, leave the room through the marked fire exits and follow the instructions of the ushers and staff. No test is forecast for today. Please make sure that all mobile phones, pagers and BlackBerrys are switched off as they interfere with the broadcasting equipment.

[2] The National Assembly for Wales operates through the medium of both Welsh and English. Headphones are provided, through which instantaneous translations may be received. For those who are hard of hearing, they may also be used to amplify the sound. The switch is on the front; select channel 1 for the translation.

9.34 a.m.

**Ymchwiliad i Leihau Gollyngiadau Carbon yng Nghymru
Inquiry into Carbon Reduction in Wales**

[3] **Mick Bates:** At long last, we are going to get started, this morning, on our carbon reduction inquiry. It is a great pleasure to welcome our first witnesses: representatives of the Environment Agency Wales. We welcome Roger Wade, a waste and PARCH adviser, and Peter Wilkinson, who is also a waste and PARCH adviser. I am told that 'PARCH' means process industries regulation, air radioactive substances regulation, chemicals and health. Is that correct?

[4] **Mr Wilkinson:** That is correct.

[5] **Mick Bates:** The paper from the Environment Agency has been circulated to Members. I am sure that the Members are eager to hear your presentation, which, I would remind you, should be no longer than 10 minutes—it could always be shorter, of course. There will then be questions from committee members. So, it is over to you both.

[6] **Dr Wade:** Bore da.

Dr Wade: Good morning.

[7] Thank you for allowing us to make a presentation to you this morning. I am Dr Roger Wade and I am a PARCH adviser. The first thing that we would like to talk about is why we are interested in reducing carbon emissions, which is the key issue of climate change. I think that most scientists now agree that the man-made emissions of carbon dioxide and other greenhouse gases are the key causes of temperature increases in the world. If we are to limit the damage, so that we do not reach the stage of dangerous climate change, we must keep the concentration of carbon dioxide in the atmosphere somewhere between 450 and 550 parts per million. That corresponds to a temperature increase of no more than about 2 degrees. If we do not manage that, we will get into dangerous climate change, and we will then be looking at issues such as the melting of the Greenland ice cap, which is projected to start at an increase of around 2.7 degrees. That would eventually, not immediately, cause sea level rises of about 7m. This could last for several hundred years. A 7m rise in sea level would doom many coastal cities in Wales, and in the UK generally.

[8] Even given the amount that is already in the atmosphere, we are looking at significant numbers of people in Africa suffering from drought in the next 50 years; and, in Bangladesh, as you can see on the slide, there would be a 1m rise in sea levels, which would affect 10 million people at least. In Wales, we are looking at vastly increased storm problems, and a rise in sea levels of about 1m. It may well be that Wales would not be as badly off as many places, and we could see an increase in tourism, but it may be only a few decades before we get into problems of pressures of migration into Wales and so on, so it would be a short-term benefit, if a benefit at all.

[9] Turning to the role of the Environment Agency Wales, we are the main regulator of greenhouse gases from industry, through the European Union emissions trading scheme, on which I will go into greater detail later. Through our pollution, prevention and control scheme, we also regulate industry outside greenhouse gases. In agriculture, we do work that looks at reducing the amount of fertiliser, that is emissions by nitrous oxide. We are likely to take over the F-gas regulations, which deal with minor greenhouse gases, and we are likely to become the regulator for the carbon reduction commitment, which is looking at a trading scheme for major high-street organisations such as retailers and insurers. Indeed Government and local authorities would come under this carbon reduction commitment, which is a carbon trading scheme. I will go into a bit more detail on carbon trading schemes.

[10] We are also very involved in the adaptation agenda for climate change with regard to the way in which flood-risk management is going to change and how water resources are going to change. We are very happy to be involved in partnerships. We have been discussing with the Countryside Council for Wales and the Forestry Commission a partnership called Tir Cloi, through which we are looking at investing money from companies that are trying to become carbon-neutral in renewable energy projects. We are also helping people to prepare for climate change, and we seek to set an example. We feel that we ought to be an exemplar by looking to reduce our carbon emissions, and we have produced the Environment Agency Wales strategy on climate change.

9.40 a.m.

[11] One of the questions that we need to talk about at some stage is, 'What are the indicators of carbon reduction in Wales?'. At the moment, there are perhaps two key indicators of how we are doing on carbon emissions. The total amount of carbon emissions is about 40 million tonnes a year, and that works out at 14.31 tonnes per person in Wales, as opposed to the UK average of 10.76 tonnes. So, the figure for Wales is very much higher than the UK average in terms of total emissions. However, that is because there is a hugely higher industrial base in Wales than there is in the UK, and it does not really reflect individual consumption. That can be looked at by people's ecological footprint, where we look at all the exports and the energy associated with goods that are bought. If you look at that, you will see that the figure for Wales is lower than the UK average. So, this gives a very divergent view of how Wales is doing. It is important that we assess what we are doing against things that mean something and that we can all understand. The Carbon Trust, which is presenting later, has come up with another possibility, which is to look at emissions from the end user, which I think is very useful.

[12] We have talked about trying to keep the atmospheric increase down to 2 per cent, and the UK's targets for the future are now incorporated in the Climate Change Bill, which is still out for consultation. That is looking at a 60 per cent reduction by 2050 and a further 30 per cent reduction by 2020. At the moment, the existing UK target refers to our commitment under the Kyoto agreement, which we will meet, because we have managed to reduce other greenhouse gases and carbon dioxide quite a lot. However, this slide shows how far away we are from meeting the internal target that the UK has set itself for 2010. So, targets are

important as they are the other side of the indicators. The key question that needs to be asked is, 'What will we do if we do not meet the targets?'. Will we adjust the policies? Do we actually have to invest some money into other ways of achieving those targets? Your own target of producing 4 TWh of renewable energy in Wales by 2010 looks like it will probably be missed. So, what happens then? What if you do not meet the target?

[13] Another key question is, 'How will the Climate Change Bill be translated for devolved Governments?'. I am afraid that there is only one very small paragraph in the Bill about that. So, in terms of the target of 4 TWh, what will happen if that is missed? Will there be a change of policy? How do you monitor that? One of the key questions coming out of the Bill is whether there will be real targets in Wales, or whether the 2011 commitment for a 3 per cent reduction in the devolved areas will be used. If so, how firm will that be?

[14] On the contribution of different gases to emissions, the blue section on the slide shows carbon dioxide emissions and the reddish section shows non-energy carbon dioxide emissions. The figure for basic carbon dioxide is around 82 per cent, for methane, it is around 9 per cent, for nitrous oxide, it is 8 per cent, and the figure for the so-called F-gases, which are part of refrigeration, is 1 per cent. As the figure for carbon dioxide is around 82 per cent, that is the one that we will really look at in detail. However, it may be well within the capability of the Welsh Assembly Government or the Assembly to influence the figures for gases such as methane and nitrous oxide, because a lot of these gases come from the agricultural industry. It may be that we can also look at reducing those sorts of emissions.

[15] Wales's emissions in 2005 were about 42.5 million tonnes. This next slide breaks it down more than the first table in the paper does. We are looking at about 33 per cent or so from industrial activity, a third from energy production, about 15 per cent from transport, and 13 or 14 per cent from domestic sources. Again, I would stress that this is unusual in a UK context, because of the very high level of industrial emissions here, so please do not think that transport and domestic sources are not important because they do not seem to be very high. It is extreme that Corus and Aberthaw are about the same, individually, as the whole of the transport or domestic sectors as we see it on there. That is a significant issue.

[16] **Mick Bates:** You have only a couple of minutes left for the presentation. Is that okay?

[17] **Dr Wade:** Yes. I thought that I had 15 minutes. I do not know whether you want to stop me.

[18] **Mick Bates:** No, please finish.

[19] **Dr Wade:** Could I have 15 minutes, as that is what I had planned for?

[20] **Mick Bates:** Okay.

[21] **Dr Wade:** The next slide looks at the projected changes in various sectors. As you can see—and I am afraid that this is not in the paper, but I will provide you with a copy of these slides—it is expected that transport and domestic emissions will increase over the next 10 years or so, whereas the industrial and commercial sectors, and even electrical supply, are set to decrease.

[22] What is the UK Government doing? This slide shows a list of a few policies: the renewable obligations, the European Union emissions trading scheme, and so on. Within the UK climate change strategy, there are graphs showing the likely carbon reduction associated with each of those policies—at least the projections. These are not always correct, but this is what people are looking at. It is clear from this that, until 2010, the expected major reduction

is in the EU emissions trading scheme. It rather dwarfs all of the other policies. It is a case of whether what we can do about the EU ETS in Wales is significant.

[23] The EU ETS is a carbon-trading scheme, which means that individual companies are given allocations. If they go above that allocation, they have to pay for extra allocations; if their emissions are lower, they can sell part of their allocation. So, it is not a hard regulation in that we do not prosecute them if they go over a particular level, but there is a financial penalty. At the moment, that financial penalty is dependent on the price of carbon, as this is a carbon-trading scheme. These schemes are seen as the way ahead, but, at the moment, there is not a very significant decrease in Wales. In fact, for the first two years, the level went up. In phase 2, even if we meet the allocations being considered, we will still be only about 1 or 2 per cent below the 2005 level. So, we need to find ways other than the EU ETS to deal with industry.

[24] Unfortunately, I do not have a lot of time to go into some of these other slides. This one shows three out of the four key issues for energy, including the gas price and the price of carbon, which can be taken as an environmental issue. I do not have much time to discuss these, but I can come back to them, if it is of any use.

9.50 a.m.

[25] A key thing that we need to talk about is combined heat and power. In a coal-fired power station, only a percentage in the low 30s of the heat is used for electricity. If we can reduce the amount of electricity used at home, that reduces at least two units at the power station. So, although we may not be able to do things through the EU emissions trading scheme, if we have strong conservation measures, they will have an amplification effect on the amount of energy saved.

[26] We would also like to see more use of combined heat and power, which we could do through the planning system. We have had a particular issue at Pembroke power station, where we were quite upset about the amount of heat being lost there. We cannot believe that this type of project is still going ahead, when so much heat is thrown out. If we can locate places where there is combined heat and power, that must be a better way forward.

[27] We also have an abatement cost curve, which is very difficult to read on the slide from here, but copies will be supplied to you. It shows that certain activities are cost-beneficial, such as insulation. I am afraid that you cannot read that slide, so I shall have to provide it to you. The ones below the lines are cost-beneficial and the ones above the lines are costing. The amount of carbon abatement is equivalent to the width, so that is something that we will have to come back to.

[28] Now, I have not gone doolally, and I have not made a mistake; this next slide has picture of the rainforest on it because the Amazon is the key store for carbon in the world. The key store for carbon in Wales is uplands, peats, moors and bogs. They are our equivalent of the Amazon and, unless we protect the carbon that is stored in the land, as well as trying to reduce our emissions, we will not be helping ourselves. There are two sides to this equation, and it is not just about securing a reduction in carbon emissions.

[29] Biofuels will be a big issue for agriculture. There needs to be that contribution from agriculture, but we are also concerned that it should not use so much fertiliser or nitrous oxide that it creates even more greenhouse gases.

[30] I have a slide about transport, but we have no time to discuss it other than to say that aviation is the largest-growing area of carbon emissions. Although it is supposed to come within the EU ETS in 2011, we are concerned that it will not make the reductions needed. We

also need to look at planning for airports as a key issue.

[31] The final slide is headed ‘Can I see your driving licence and your carbon footprint?’. What I have not yet mentioned is individual, personal and behavioural changes. The reduction of carbon dioxide is a behavioural change as well as a technical change. In fact, it is probably half and half. If we are to reduce our emissions from cars, for instance, we can reduce from a big car to a little car, but to take it down 60 per cent we must also cut our mileage by half. So, there is also the personal stuff. The agency is trying to be an exemplar for carbon, as I would hope the Assembly is trying to do. It is important that people who show leadership also ‘live’ the reductions, so to speak, so I urge you to consider that carefully.

[32] So, the key issues include targets, and indicators are very important. Cap-and-trade schemes are important because, globally, they are the only the game in town, so do not dismiss them, but, if you are looking to make reductions in the next few years, they will not help. We must look at other ways of conserving energy and at those aspects that are cost-beneficial—in other words, the stuff that we could be doing that would save money—which we can invest in. Those are the sorts of areas, together with looking carefully at the types of energy. The energy route-map will be critical for you. I am afraid that coal is not the best option, even with carbon capture and storage because, unfortunately, Wales is not in a very good position for carbon capture and storage. It may be that small coal-fired power stations with combined heat and power would be good, but we must think carefully about the energy route-map.

[33] **Mick Bates:** Thank you for that, Roger. It was absolutely fascinating. The amount of information on those slides will be extremely useful to us as we learn more about carbon reduction and about what we can best target to reduce it. Just to confirm before we go on to questions, will you provide us with all those slides?

[34] **Dr Wade:** Absolutely.

[35] **Mick Bates:** Thank you very much. We will now take questions and comments from Members. We will start with Lesley Griffiths.

[36] **Lesley Griffiths:** What action do you think that we can take in Wales to improve the climate for investment in efficiency measures?

[37] **Mr Wilkinson:** It is a difficult question because, in Wales, the main sources of carbon dioxide are electricity generation, steelmaking, and the refineries, which are all largely for export. If the Assembly had control of planning permission for energy generation, then you may be able to do something in that regard. Alternatively, if you could more strongly influence the Department for Business, Enterprise and Regulatory Reform—I think that that is its title—in how it exercises planning permission, that would probably be the most effective way in which you could reduce carbon dioxide emissions.

[38] It is also important that investment is used to influence people’s behaviour and attitudes. Making installation of renewables more available—I have just been offered free installation for my home, which I will take up—is also a useful way forward.

[39] There is a particular problem in Wales in that there are more households in fuel poverty in Wales than in the rest of the UK. That is due to a mixture of having old houses and the fact that many houses are not on the gas grid. That may be another area at which the Assembly could look closely to see what more it could do.

[40] **Dr Wade:** I also think that there should be investment in infrastructure that would support things such as the use of biofuels. One point that I made was that there is this

potential conflict between what I call first-generation biofuels and food, whereas if you use waste from food crops and have the infrastructure to transfer that waste into fuel—second-generation biofuels, as it were—the conflict with food is removed. However, it means quite an expensive piece of industrial investment. So it is about that type of thing, and the type of investment that would help people to produce biofuels, which may be important.

[41] **Mick Bates:** I am sure that there will be discussions about from where we get that investment in the future.

[42] **Brynle Williams:** It was interesting to hear you mention combined heat and power. I find it sad that I saw this in progress 40 years ago in Scandinavia and yet we are only just beginning to discuss it here. You indicated that we would need planning legislation to make this work. Could this be taken from various sources—not just from power stations, but from industrial processes up and down the country? This is a very taboo subject, particularly given that we are in the era of recycling, but there is a residual waste at the end of the process that must be disposed of somewhere. Do you agree that the problem is trying to get people behind this?

[43] **Mr Wilkinson:** The other problem with CHP is not just planning, but the pricing structures for electricity and heat and steam. If you have a dedicated CHP station such as that in Barry, which supplies the chemical works, that works very well. That station achieves something like 80 per cent efficiency, which is excellent. However, many people get more money from generating electricity than from generating heat or steam. So, we need to look at the balance of cost and pricing.

[44] There is also the problem of location. You might remember the old days of the Central Electricity Generating Board, and that it had a policy of having big power stations in relatively isolated places. To have CHP, you need customers nearby for the heat and the steam so that the infrastructure is not too expensive. Also both the suppliers and the customers must feel confident that their contract will last for between 20 and 25 years. They do not want to think that in two years' time they might lose their source of heat and power.

10.00 a.m.

[45] So it is about changing the whole economic structure. In Scandinavia, the structure has been put in place. There is an excellent example in Denmark, in the town of Kalundborg, where the power station supplies heat and steam to the local pharmaceutical company, which makes insulin, and to the local plasterboard company. It is all integrated. It was not brought about by politicians, but by the engineers in the different sites getting together on a social, friendly basis and just making these contracts and getting it to work.

[46] However, we do not have that sort of infrastructure in this country. You will never be able to put combined heat and power at Aberthaw, because the customers are not there. Similarly, with Pembroke power station, which Roger mentioned earlier, there are no customers—you could cover the whole of Pembrokeshire in greenhouses to take the excess heat that it produces. You need the customers. What it would mean is going for smaller power stations, located largely in urban areas where there are customers. That would be a big change from our current system.

[47] **Dr Wade:** There was another part to the question, which was what we do with residual waste. The issue here is the antipathy towards anything that involves the words 'incineration' or 'waste-to-energy'. No matter how you package it in words, there is public antipathy towards it. To some extent, that is rooted in the past, as a lot of these antipathies are. There have been huge improvements in the technology for the treatment of the waste gases. It is interesting that the attitude depends upon where you are. For example, there is an

incinerator on the Shetland Islands that provides combined heat and power, and the Orkney Islands Council was apparently censured for not having one in its area, because the people of Shetland like it so much, because it gives them free heat from waste. So, it depends upon where you come from as to how you feel about combined heat and power from an incinerator or a waste-to-energy plant. That has to be part of the equation and it is a key issue. No matter how much recycling you do—even if you get it up to 70 or 80 per cent—there will still be some waste left, which either has to go to landfill or be used to create power. It is a very small part of the overall equation, but, frankly, we do not have a golden bullet here. It is the summation of many small things that will make the difference in carbon reduction.

[48] **Darren Millar:** You mention in your submission that for reductions in the near future we should place more reliance on the demand-management side than on the generation side. How do you think the Welsh Assembly Government can help to improve the scope for a reduction in demand?

[49] **Mr Wilkinson:** Within the Assembly's current powers, it would be through planning. I can think of many examples, for example, the new rugby stadium in Llanelli. The old rugby stadium was accessible by public transport, but everyone has to go to the new stadium by car. Also, in the last few years, 5,000 houses have been built in Llantrisant, but very few of the residents work in Llantrisant. Those sorts of planning considerations can make a big difference in reducing demand.

[50] You could also influence the UK Government and the EU Government to improve electrical equipment, and so become more energy efficient. There are already plans to remove incandescent bulbs from the market. Opposition to that is building up already, but it is those sorts of things that can help from a Government point of view. There are also expectations. I noticed, while cycling here this morning—the halo shines nicely, does it not?—that one of the newspaper hoardings advertising yesterday's *South Wales Echo* read 'the Assembly promises to provide better airport links'. Can you have better airport links and mitigate against climate change? There is doublethink there. There always is, is there not? We say this, but we do that. You need more integration; you have to decide what the priority is. People say, 'You have to have a good economy', but there will not be an economy if we get into dangerous climate change.

[51] **Dr Wade:** One of the more tucked-away recommendations in our report is that when you are looking at transport plans, or any plan, really, whether it is on energy or economics, assessing their overall carbon impact—and there are mechanisms for doing that—gives you a handle on the impact of particular policies or infrastructure-type developments.

[52] **Darren Millar:** So, you think that there should be carbon impact assessments of large-scale planning developments or even smaller-scale ones?

[53] **Dr Wade:** Even policies.

[54] **Darren Millar:** I see.

[55] **Mick Bates:** That was very useful. Is there information available now that could help us to undertake carbon impact assessments?

[56] **Dr Wade:** There are models that will do that, and we can give you information on that if you are interested.

[57] **Mick Bates:** We would be very interested in that; thank you.

[58] **Karen Sinclair:** Following on from your observations about planning, because huge

impacts can be made there, as part of our home energy efficiency schemes, which are to do with the installation of insulation, heating and so on, we have started to do a little work on alternative energy, such as heat-transfer pumps. Picking up on your comment about older houses and houses not being on the gas grid—certainly where I live is very rural and therefore we are not on the main grid for anything other than the telephone—what do you feel about pushing for HEES to roll out alternative energy grants? We only have it on a test basis at the moment. Would that make an impact?

[59] **Mr Wilkinson:** It would, but the main impact might be psychological. The actual amount of carbon that you would save would not be all that great compared with what is released through transport and coal-fired power stations. However, psychologically it would give people the message that you are taking this seriously and that you are helping them to do something personally. We need people to make a personal commitment to look at how they contribute to this. The Assembly Government can help through that sort of support. When someone puts a photovoltaic unit on their roof, or gets extra insulation, that brings this message home to them.

[60] **Alun Ffred Jones:** I was going to ask you how you came here this morning, but Mr Wilkinson has trumped me there. You did not cycle, presumably, Dr Wade?

[61] **Dr Wade:** No, I came by train.

[62] **Alun Ffred Jones:** You are okay then. You suggested that the carbon trading scheme is either not working at all or is not working well in reducing carbon emissions in Wales. Did I understand that correctly?

[63] **Mr Wilkinson:** It is working well in the mechanical sense. The way that it is run, getting the results in, checking what people are saying and the buying and selling are working well. What is not working well is that the price of carbon is too low. At the end of phase 1, it was €1 per tonne, which is nothing really. The main reason for that is that the allocations given by different member states were far too generous, and trading is across all of the European Union, so even if one member state is more rigorous than another, if member states issue allocations, as happened in some cases, that are greater than their previous years' emissions, it is a matter of supply and demand, and the price will be low.

[64] In phase 2, the EU has been a little tougher, so the forward price is now about €16 per tonne, which is a bit more interesting, but if there is to be effective change, we need to be looking at something between €20 and €30 per tonne. That would really make the generators think about how they are going to generate electricity and it would make people think about how to reduce carbon. It would also create some difficulties, because many of the large industrial sites in Wales, such as Corus at Port Talbot, are trapped by their technology. There are only a certain amount of things that they can do to reduce carbon. So, they are, essentially, facing increased costs. However, carbon trading will only work if the allocations—the individual member states' caps—are rigorous and tough. This is where politicians get worried, because of the side effects that you will get from that.

10.10 a.m.

[65] **Dr Wade:** There is potential within the UK, and even within Europe, to have an input into this. I would not rule out the influence that Wales can have on this. However, it is such a big, wide scheme that it is looking at a long-term process—it is the global as well as the European way of trying to sort out issues. The Kyoto agreement was a cap-and-trade issue, the EU emissions trading scheme is a cap-and-trade issue, and even the carbon reduction commitment, which is looking at retail and so on, is cap and trade. It has even been suggested that the electrical supply companies could have an allocation and could be based on cap and

trade, to try to ensure that they then had a real impetus to reduce the amount of electricity that they supply to consumers. Therefore, this cap-and-trade issue is rather difficult to get your head around—even I found it hard. However, it is so widespread in the thinking of policy makers that I am afraid that it is not possible to dismiss. However, it is not a short-term reduction scheme.

[66] **Mr Wilkinson:** I suppose that you could draw an analogy with chemotherapy.

[67] **Alun Ffred Jones:** Could you elaborate on that?

[68] **Mr Wilkinson:** Chemotherapy gives you a chance of cure, with a lot of painful side effects, but it is worth doing sometimes.

[69] **Alun Ffred Jones:** As I understand it, your line of argument is that these are fine, but that, in terms of what we can influence here, we should be concentrating on smaller schemes, or more practical schemes, such as energy-saving devices in the home, as well as looking at planning issues.

[70] **Mr Wilkinson:** Yes, and, through that, Wales could be an exemplar for the rest of the UK, indeed for the rest of the EU. If it could do that well, it would show how a developed country can tackle these issues on that scale.

[71] **Dr Wade:** Peter has written a paper looking at the top 11 emitters in Wales. Those top 11 are 98 per cent of 50 per cent. We look carefully at where they could possibly reduce their emissions. However, we do not have much in the way of regulatory power to force that. However, what we had, and what we have outside companies in the EU emissions trading scheme, within the pollution prevention and control regulations, is a way of requiring best available techniques for energy. In some ways, we lost that for the big boys when the EU ETS came in; we could perhaps have had a different way of controlling them if we had not had the EU ETS, through the pollution prevention and control mechanisms. We are looking at whether any of the possible aspects of the pollution prevention and control mechanisms could take us half a step back to require certain energy efficiencies. However, that is very much in the future.

[72] **Alun Davies:** Thank you for your presentation this morning. I have two questions. First, I would like to discuss the ecological footprint that you mentioned in your presentation. You said that Wales emits more per head of the population than the rest of the United Kingdom, but that, at the same time, our ecological footprint is smaller. I assume that, per head, that is due to social reasons—to poverty rather than to our green conscience.

[73] **Mr Wilkinson:** I believe that the difference is mainly because Wales exports a lot of energy-intensive products—electricity, mainly to the rest of the UK, steel to the continent, and refinery-end products to the United States of America. Therefore, although the carbon is being emitted here, the demand that results in that carbon comes from outside Wales. That is why you get this difference. If you just look at what people in Wales consume, you get a much lower figure. That is the main difference.

[74] **Alun Davies:** And that lower figure is simply due to the nature of the wider economy?

[75] **Mr Wilkinson:** Yes.

[76] **Alun Davies:** Okay. You seem to be quite negative about some of the targets that have been set by the Government. Would that be a fair assumption or a fair characterisation of your views?

[77] **Mr Wilkinson:** We are not negative about the targets; we are just very disappointed that they will probably not be achieved. Our other concern, which Roger explained, is what will happen if they are not achieved. Are people already planning for policy changes that will correct this failure or are they just willing to accept it?

[78] **Dr Wade:** It is very difficult to be too critical of the UK Government when it is in the lead, but the analogy that I would use is that even if you are top of the class and everybody fails the examination, it does not help.

[79] **Alun Davies:** So, how would you approach it and what are your views on the Welsh environment strategy that was published by the Assembly Government last year?

[80] **Dr Wade:** In terms of climate change, there is a huge number of key actions in it. I would probably say that if all of those were followed through correctly, and we could meet the aspirations that are included in the strategy, that would be great. I think that it is really a case of whether or not the monitoring and the aspirations will be matched by the reality.

[81] **Mr Wilkinson:** I think that the action—

[82] **Alun Davies:** May I just take you up on that point? You mentioned some current limitations of policy in your paper. Does that undermine, or signal dissatisfaction with, the Welsh environment strategy?

[83] **Dr Wade:** I think that they were primarily the overall UK ones. Those comments were generic inasmuch that if there is no way of correcting policies once you see that you are going off line, or it takes too long to do it, that issue really needs to be addressed. However, we recognise the difficulty in Wales in terms of setting targets that you can control. It would be no good to set up targets that are impossible to realise because you do not have control over them. That has to be said as well.

[84] **Mr Wilkinson:** May I make just one more comment? An action plan results from the environmental strategy and it is due for revision this year. We would certainly like to be heavily involved in looking to see where the action plan could be made more appropriate.

[85] **Alun Davies:** Do you think that it is a good action plan?

[86] **Mr Wilkinson:** I think that it was the best that could be done, under the circumstances, at the time. We now have three more years of experience about what can be done and about the way in which different people work together; we need to make use of that to refine and polish the action plan so that it can become more effective.

[87] **Alun Davies:** Could you give us an example of where you believe that it could become more effective?

[88] **Mick Bates:** There are 60 recommendations; you have plenty of choice.

[89] **Mr Wilkinson:** Yes, I am just trying to think of one in particular. Certainly, the way that different agencies such as the Countryside Council for Wales, us and the Forestry Commission work together could be more effective, especially in terms of the way that we can all contribute to help the Assembly to put together an action plan, particularly on the agricultural side. That may present more opportunities for working together. The way in which the action plan ties up with planning might be another area that could be improved upon.

[90] **Mick Bates:** Thank you very much; we will leave it there. Finally, on this section, Darren would like to ask some questions.

[91] **Darren Millar:** You mentioned the Forestry Commission and some other things in the action plan, including helping to tie up some loose ends or improving it. There is a trade off, which you mentioned in your report, about the conflict or the tension between energy and environmental concerns. Perhaps you could tell us a bit more about that and how you see that working. You talk about the preference for the environmental concern to sometimes win the argument in terms of energy, do you not?

[92] **Mr Wilkinson:** There have been some contradictions between different Assembly policies. To my mind, and this is my own personal view, it is difficult to pursue a policy that encourages the development of a coal industry and, at the same time, seeks to reduce carbon emissions. Coal is the most carbon-intensive fuel that we know of. In many ways, the best form of carbon storage is to leave coal in the ground. That is a really big challenge in Wales, but it needs to be looked at critically and in some detail. Is it possible to develop a coal industry and reduce carbon dioxide at the same time? At the moment, the only magic wand is carbon capture and storage, but that looks difficult for Wales, because there are not any really suitable storage sites—except, possibly, a small one in the gas field in Liverpool bay. Therefore, without the sites, it will not be possible. We need to look at this sort of contradiction very carefully.

10.20 a.m.

[93] **Darren Millar:** So other contradictions might be the wide-scale felling of trees or the tearing up of upland peat areas to put concrete slabs down in order to make way for windfarms?

[94] **Mr Wilkinson:** You can do arithmetic calculations to establish the actual effect. Most wind farms have a fairly small footprint in that sense, but it is usually the access roads to them that are the issue. You need to look at those things, and I suspect that, as part of the environmental assessment, you need to do those arithmetic calculations and demonstrate what the feedback would be. Generally, with windfarms, that is only a few months. However, there may be other cases in particular locations where it is much longer than that.

[95] **Dr Wade:** You would need to embed the cost of carbon into each of these new projects. The real social cost of carbon is probably nearer \$80 or more dollars a tonne, rather than the cost that we talked about. This is not usually considered by, say, Ofgem, when looking at the type of energy that is required. Until you have a realistic environmental factor that feeds into decisions about what energy should be made, there will perhaps always be a bit of a loss for the environment.

[96] **Mick Bates:** On behalf of the committee, I thank you for your excellent paper, presentation and enlightening answers. Many of them have raised many other questions. Finally, I note, in point 4.4 of your paper, the agency's footprint. I think that there was a challenge in your presentation that this committee should perhaps undertake to calculate its own footprint. I am sure that we will discuss that and publicise it, as you publicise and publish your results. Thank you both very much. I look forward to seeing the paper, and we may take evidence from you again.

[97] We will move to our second set of witnesses this morning. It is a great pleasure to welcome Mike Batt, manager of the Carbon Trust in Wales, and Russell Davey, who is the senior project co-ordinator of the Carbon Trust in Wales. Members have received your paper. Perhaps you would like to make a statement before we ask questions.

[98] **Mr Batt:** We have a 10-minute presentation. Good morning, and thank you for the opportunity to attend today's meeting and provide evidence. As Mick said, I am Mike Batt, and I am the manager of the Carbon Trust in Wales. Appropriately, at my right hand, is Russell Davey, our senior project co-ordinator. The main office of the Carbon Trust in Wales is in Nantgarw, just outside Treforest. It is easily accessible to everyone, and it is always open to anyone wishing to pay a visit and find out more information, perhaps following this meeting.

[99] The presentation will be split into four sections: an introduction to the products and services provided by the Carbon Trust; a summary of the Wales energy and carbon emissions studies, which are carried out annually by the Carbon Trust in Wales; a summary of the achievements so far by the Carbon Trust in Wales; and an overview of the future opportunities that we believe present themselves to us in Wales.

[100] The Carbon Trust is an independent company set up by the Government to accelerate the move towards a low-carbon economy. We act as a catalyst for enterprise and development in commercially viable low-carbon technologies, and help public and private sector organisations reduce their carbon emissions. Our activities have been restructured over the past 18 months into five key business areas. We used to have three pillars: what can we do today?; what we can do tomorrow?; and who do we need to talk to?. However, the business and social environment has changed dramatically over the last few years, along with awareness of climate change. So, we have restructured our business into five areas.

[101] Carbon Trust insights is intended to inform people of the opportunities that are presented by climate change. There is the opportunity to make a difference yourself, to liaise with Governments—especially the Welsh Assembly Government, on our part—to keep everyone informed of what the opportunities are and how we can move forward together to help make business sense of climate change. The decision-makers are extremely important. Everything that we do needs to make sense to those decision-makers; if it does not, we are just talking into the wind, and our recommendations will go nowhere.

[102] Carbon Trust solutions works with business and the public sector to deliver practical solutions for identifying carbon emissions and finding ways of cutting them. We provide the know-how and the resources to help them to do that. To date, the Carbon Trust has saved nearly 11 million tonnes of carbon dioxide equivalent across the UK; I will speak more about the Welsh numbers shortly. As well as providing support to all organisations, we provide support targeted specifically at small and medium-sized enterprises via our interest-free loans and energy-efficiency schemes, to help them to move forward as well.

[103] Carbon Trust innovations helps to develop commercially promising low-carbon technologies, and move them from the test bed or the laboratory through to commercial enterprises. We have some good examples, particularly here in Wales.

[104] We also have two commercial arms. Carbon Trust Enterprises Limited creates new, high-growth, low-carbon businesses by identifying opportunities to bring key skills and resources forward. Carbon Trust Investments Limited attracts money from venture capitalists, and works with green banks to generate finance for these businesses to move forward. So, effectively, we identify the opportunities, implement them, identify companies that need help, and give them some form of financial backing.

[105] We are a mission-driven business, and our mission is simple: to accelerate the UK's transition to a low-carbon economy, by developing low-carbon commercial technologies and helping organisations to reduce their carbon emissions. Any profits from our commercial arms are reinvested into that mission.

[106] I will now talk about the Wales energy and carbon emissions study. Welsh industry is very large, and we have over twice the per capita carbon emissions of the UK. We account for just over 6 per cent of the UK population, but we have over 12 per cent of the UK's carbon emissions. This is due to our inherited, high-energy-intensive industries. We have the aluminium, steel, coal, food, drink, paper, cement, glass and chemicals industries, as well as 17.5 per cent of the UK's oil refining capacity, in Pembrokeshire. Evidence from the Assembly Government website suggests that the turnover of large energy-intensive industries such as iron and steel has increased since 2003-04. Our Wales energy and carbon emissions study came up with the same picture, the difference being in the way in which we carried out our study, as you can see from table 1. We looked at what carbon emissions Wales is specifically responsible for as the point source of energy consumption. So, we take into account all agricultural, transport, domestic, public sector, and industrial emissions within Wales. The format of that has been formulated in conjunction with the Welsh Assembly Government, and we feel that it is fair to do that—to provide the information on all sectors so that it is a benefit to all organisations within Wales, and so that it helps us to move forward, working together in a structured way to reduce carbon emissions.

10.30 a.m.

[107] The table provided shows that emissions have increased in Wales since 2003-04. It clearly shows that Wales is leading the way in some ways with regard to industry, and the upturn in world steel production and demand has an impact on Wales's carbon footprint. There was an unfortunate incident early in 2001-02, due to a blast furnace accident in Port Talbot. That furnace has been replaced, and it is now one of the most efficient furnaces in Europe, if not in the world. Steel made in that furnace does increase Wales's carbon footprint, but what would you prefer: for that steel to be made here, efficiently and with less of an environmental impact, or made less efficiently elsewhere? We are talking in a Wales context, but climate change is a global issue, without doubt. We can see the evidence of that in graph 1, in that, overall, emissions in Wales since 2000 have reduced; the carbon emissions that Wales is responsible for have reduced. The increase from 2002 onwards, I have explained, is due to an increase in industry.

[108] What achievements has the Carbon Trust in Wales had so far? Throughout the last year, climate change has once again been high-profile news. The Stern report highlighted a need for business and Government to realise not only the environmental impact, but also the projected financial impact of the greatest challenge facing us all. In Wales, many organisations have woken up to the advantage of proactively addressing climate change from a business perspective, and they are taking the opportunity to improve business performance while reducing their carbon emissions. Now in our sixth year of delivery of cost-effective support, helping a wide range of organisations across Wales to save energy and reduce their carbon emissions, we value our strong working relationship with industry and the Government, which enables us to keep abreast of technical and political issues while remaining independent. This ensures that our advice and support is as effective as possible.

[109] The Carbon Trust works in partnership with organisations throughout Wales to identify and implement the carbon reduction measures that make environmental and business sense. The measures fall into three categories: no-cost; low-cost; and capital expenditure. No-cost and low-cost are extremely important; they can be implemented swiftly and can make an immediate difference to carbon emissions and business performance throughout the country. Capital expenditure needs to be built into business plans. We work with all organisations to help to develop those implementation plans, which can be three to six-year plans, so that the measures are implemented in an environmentally sensitive manner that can also meet the needs of businesses.

[110] During 2006-07, organisations in Wales working with the Carbon Trust identified

£16 million of savings opportunities—that is 163,000 tonnes of carbon dioxide emissions. Following on from 2005-06, our clients implemented annual savings of over 100,000 tonnes of carbon dioxide emissions in Wales. Those cost savings for companies do not just include more than 100,000 tonnes of carbon dioxide; the lifetime savings for the companies involved is over £29 million. As a result of working with the Carbon Trust in Wales, business and public sector organisations are now saving over £19 million annually, as well as reducing their carbon footprint.

[111] We introduced a new client relationship management system during last year, and that has helped us to track all the recommendations and all the support that we give to organisations throughout the UK more accurately. It has also been made fully auditable. PricewaterhouseCoopers audited the Carbon Trust's client relationship management system last year, and we achieved limited assurance, which is extremely important to us, because this is the justification of the recommendations that have been implemented and which represent real carbon savings. They are auditable, and they can be tracked.

[112] We are very proud of our relationship with Wales's 22 local authorities, and we are keen to continue developing those relationships in new areas. Last year, our work with schools and leisure centres, in the public sector, identified opportunities where schools, simply by optimising their control systems, can save 26,000 tonnes of carbon emissions annually, which equates to £5 million off the public sector energy spend in the education and leisure sector. This is being funded by the Carbon Trust and the cost to local authorities to implement the measures is nil. That includes an element of training to ensure that the people who make the changes can keep it up in the future.

[113] Public sector carbon management was piloted in Wales. We are extremely proud that we led the way for the rest of the UK to follow. Phases 1, 2 and 3 were all piloted in Wales first. Cardiff County Council is working in partnership with the Carbon Trust. It has signed up to make a 60 per cent reduction over the next 10 years in its carbon emissions. That will be done through energy efficiency, renewable energy integration and through looking at its building programmes.

[114] Small and medium-sized enterprises have benefited, as I said, from our helpline support, publications and events and they also make good use of our interest-free loan schemes. Our events programme is run throughout the country to address the issues that our clients request us to inform them about—not what we think they need to know, but what they tell us they need to know. That helps their business straight away.

[115] There are two graphs at the end of the presentation. I do not want to take too much of your time. One shows the identified and implemented carbon savings through the years from the Carbon Trust. You can see that the implemented savings line follows that for identified savings because some of these need to be built into business plans. You can also see that there is nearly 0.5 million tonnes of carbon saving there. The other graph tracks the annual savings made through working with the Carbon Trust.

[116] The final part of my presentation is about what we think could be done in the future with the Carbon Trust in Wales working in partnership. The first thing is a continued programme of support along the line of the business and local activity plans agreed with the Welsh Assembly Government. We wish to deliver ongoing customised support to our energy users in Wales, through carbon management and energy efficiency; deliver our events programme; carry out informed decision-making; and aid with Welsh energy and carbon emissions studies. We are also carrying out a market study to see how we can further penetrate this area for the greater benefit of business and the public sector throughout Wales. Thank you for your time.

[117] **Mick Bates:** Thanks for that, and congratulations on what seems to be a massive reduction. I look forward to seeing Cardiff County Council reduce its carbon use by 60 per cent. That is quite a challenge. Members will now ask a series of questions or make a series of comments, beginning with Alun.

[118] **Alun Ffred Jones:** Mae gennyf dri chwestiwn ac mae'r un cyntaf yn gwestiwn ffeithiol. Fel ymddiriedolaeth yng Nghymru, beth yw eich cyllideb ac o ble mae'r arian hwnnw'n dod?

Alun Ffred Jones: I have three questions and the first is a factual question. As a trust in Wales, what is your budget and where does that money come from?

[119] **Mr Batt:** The Carbon Trust is funded by the Department for Environment, Food and Rural Affairs, the Department of Trade and Industry, the Scottish Executive, the Welsh Assembly Government and Invest Northern Ireland. We benefit from central funding to cover the costs of our customer call centre and the UK-driven programmes that we benefit from in Wales. The direct support given from, and delivered in, Wales by our client management team is £4.4 million from the Welsh Assembly Government.

[120] **Alun Ffred Jones:** Mae gennyf ddi-ddordeb yn y graffiau a'r rhesymau yr ydych yn eu nodi am y cynnydd mewn allyriadau carbon deuocsid, sef bod yr hyn a ddigwyddodd yn Corus, Port Talbot, yn bennaf neu'n rhannol gyfrifol. A ydych yn rhagweld y bydd y graff hwnnw yn parhau ar i fyny dros y blynyddoedd nesaf, neu a ydych yn disgwyl gweld lleihad yn yr allyriadau?

Alun Ffred Jones: I am interested in the graphs and the reasons that you state for the increase in carbon dioxide emissions, namely that what happened at Corus, Port Talbot, was mainly or partly responsible. Do you foresee that that graph will continue to rise over the next few years, or do you expect to see a reduction in emissions?

10.40 a.m.

[121] **Mr Batt:** I would expect the industrial emissions from Wales to be slightly higher this year. due to international steel demand. The efficiency of the production of those products should increase with some of the work that we are doing with people in the steel industry. We need to take the overall approach of making business in the public sector in Wales more efficient per unit cost. A suggestion has been made that we link emissions to gross domestic product in Wales, and have a more accurate financial forecast as to how we are performing against gross domestic product and industrial emissions. However, I think that, this year, the Wales energy study for 2004 will show an increase in carbon emissions.

[122] **Alun Ffred Jones:** Yn olaf, pa fath o ddeddfwriaeth sydd ei hangen ar Gymru er mwyn i ni helpu busnesau a'r Llywodraeth i greu economi carbon isel?

Alun Ffred Jones: Finally, what sort of legislation does Wales need so that we can help businesses and the Government to create a low-carbon economy?

[123] **Mr Batt:** We have the EU emissions trading scheme legislation and the carbon reduction commitment is coming in for mid-range energy users, which will help to identify opportunities in that area and incentivise people to reduce their carbon emissions. We also have building regulations and the public labelling system that is coming in now. People will want to put their buildings on show as being energy efficient, from the public's point of view and from the corporate social responsibility side of major business in Wales. The Welsh Assembly Government has made a commitment that all buildings that it has an influence over will be zero carbon in their operation by 2011, and we are working with the Welsh Assembly Government to move that forward.

[124] **Alun Ffred Jones:** Is there any specific legislation that we could enact in Wales that

would help you to reach your, and everybody else's, goals?

[125] **Mr Batt:** Without consultation, I would say that the Welsh Assembly Government is currently moving forward in a lot of areas. We are being pro-active in the delivery of programmes in Wales. I think that we are moving forward. There may be some infrastructure change needed in the transport sector, and the Environment Agency alluded to that before this presentation.

[126] **Mick Bates:** I think that the question was about legislation. Do you have any specific recommendations for legislation that would help us to reduce carbon in Wales?

[127] **Mr Batt:** For business use and business building and development to achieve zero-carbon or low-carbon operations, we should set harder targets for business to meet in all of its buildings, and not just those buildings that the Welsh Assembly Government has influence over.

[128] **Mick Bates:** So, that is mainly around target setting.

[129] **Alun Davies:** You have described in some detail some of the work and activities of the Carbon Trust in Wales. You said that you have a strong working relationship with business and Government. Can you explain to us, please, the balance of your work between the private and public sectors?

[130] **Mr Batt:** I would say that the balance between our private and public sector business in Wales is around 50:50 on the financial side, but it is quite different on the carbon side. There is greater opportunity in some industries, as you can make a large spot-hit in some installations immediately. We are developing the relationship further with the local authorities, and Cardiff is a good example of that. We are also moving into other areas to expand our impact on businesses in Wales; we are forming a new alliance with Visit Wales, to try to reach out into the smaller end of the tourism industry and to improve its energy efficiency. That will be developed over the next 18 months or so.

[131] **Alun Davies:** Visit Wales is a public sector body. I am a bit concerned, because you have not given us examples of any of this in your presentation or in your written submission. I would like to see examples. You have mentioned cost savings in the order of £16 million, but can you give us examples of where the private sector in Wales is being helped by your work to achieve those savings?

[132] **Mr Batt:** Yes. We publish case studies, which are freely available on the Carbon Trust website. I have brought a few of them with me today. Evopac on Wrexham industrial estate made use of the Carbon Trust interest-free loan scheme to renew and reline one of its oxidising systems. It had a loan of £100,000, and the pay-back period for those savings for that company was six months, which represents £200,000 a year and 2,300 tonnes of carbon. Yuasa Batteries Ltd in Ebbw Vale has saved more than £700,000 by working with the Carbon Trust, which represents more than £300,000 a year in energy-efficiency measures. The plant manager said that, without the help of the Carbon Trust, that manufacturing plant could have been relocated elsewhere in the world. Terram Ltd in Pontypool is saving £200,000 and 1,200 tonnes of carbon a year. Headland Foods in Flintshire is saving £150,000 a year and 1,500 tonnes of carbon. Last year, Corus reduced its carbon emissions by more than 32,000 tonnes through working with the Carbon Trust. We have a series of case studies, which is freely available to anyone who would like a copy.

[133] **Mick Bates:** Just on that point, it might help if we circulated that link to Members so that we can all look for examples on the website.

[134] **Alun Davies:** Thank you for that. You said in paragraph 3.8 that you have committed £1 million of funding to development projects to support the emerging low-carbon technology sector. Could you explain exactly what you are investing in and what results you are seeing?

[135] **Mr Batt:** One example is Glamorgan University and its dark fermentation system for production of biogases—hydrogen systems—from waste products, as used at the Rank Hovis plant in Barry. It has moved that forward from pilot stages and laboratory tests, and wanted to build its first test-bed plant on site. That is now in construction on the Barry industrial estate. It has gone through all the pressure testing, and the instrumentation and control testing is in progress as we speak. That has happened with the aid of investment from the Carbon Trust, and it has moved that university's research programme on to being a programme that will have real financial and carbon benefits. It also has great replication potential, so we could develop that business further.

[136] **Brynle Williams:** Following on from Alun's comments, my particular interest is in agriculture. What involvement does the Carbon Trust have in agriculture, and what impact is it having? Agriculture plays a major part in the production of carbon, nitrous oxide and various other gases. Do you have examples of the ways in which we can address this?

[137] **Mr Batt:** The agricultural contribution to emissions has been taken into account in the Wales energy carbon-emission studies. We work indirectly in the agricultural sector; any agricultural business can come to us for help and energy surveys, which will predominantly be on the general service side of support. Some abattoirs and sectors of the agriculture industry have had support from the Carbon Trust throughout Wales. We have also been involved in investigations into biomass projects, and we provide support for those in Wales. Those would affect the agriculture industry and the supply of fuel locally to such projects.

10.50 a.m.

[138] **Brynle Williams:** Thank you for your answer. In terms of agriculture, we have an awful lot to contribute in all manner of ways, from energy production to carbon capture.

[139] **Mr Batt:** We also have the Carbon Trust's networks programme. We would be delighted for the National Farmers' Union or other agricultural organisations in Wales to apply for funding from the trust. That can be financial support with an agreed delivery plan within a network to help to incentivise union or network members to reduce their carbon emissions and be better informed. So, you can apply to the Carbon Trust for that. I believe that there is now an open call regarding networks.

[140] **Mick Bates:** That sounds very useful.

[141] **Lesley Griffiths:** You say that your mission is to help organisations to reduce their carbon emissions, and I think it fair to say that businesses are beginning to realise that they need to be more pro-active than reactive when addressing climate change. What particular opportunities do you think there are for businesses in Wales to improve their business performance while reducing their carbon emissions?

[142] **Mr Batt:** There are three ways of doing that. The methodology for business in Wales should always be about energy efficiency and reducing the need for the energy in the first instance. Secondly, we look at how we can provide that energy as efficiently as possible. Only after that would you look at off-setting the energy that is used. The opportunity is there straight away for businesses in Wales to save dramatically through energy efficiency alone. What it boils down to—and Russell is fed up of hearing me say this—is that people do not actually want energy; they want only what the energy can do for them. If we can provide that more efficiently, everyone wins.

[143] Businesses can quite easily reduce their energy bills by 15 to 20 per cent by using simple low-cost and no-cost measures. In some of the businesses the Carbon Trust has worked with, that equates to a 20 per cent increase in energy efficiency, which is directly equivalent to a 10 per cent increase in sales. That can make a huge difference to a business.

[144] **Lesley Griffiths:** Do you think that these opportunities are used by businesses?

[145] **Mr Batt:** Yes, many companies are taking these opportunities, such as Yuasa Battery, which I mentioned, Dow Corning in Barry, and others around Wales. Heating and lighting workshops were held in Swansea and north Wales the week before last, and there was great demand for that. We had to hold an extra workshop on one of the days to accommodate all the people who wanted to attend. That highlights the fact that those companies can make a great difference to their energy consumption by taking basic measures. Some of those companies are moving forward with that now.

[146] **Darren Millar:** To follow on from that, that is a remarkable statistic that you gave, which suggested that a 20 per cent improvement in energy efficiency could lead to a 10 per cent improvement in sales.

[147] **Mr Batt:** It can equate to that.

[148] **Darren Millar:** I am assuming that that is because the money that is saved is then invested in things such as marketing or improving other processes to generate the sales.

[149] **Mr Batt:** Simple production costs could be reduced, and that could be of huge benefit to a company.

[150] **Darren Millar:** But cost reduction does not necessarily mean a greater turnover.

[151] **Mr Batt:** No, but it is equivalent to that 10 per cent. Businesses vary dramatically around the country, geographically, technically and in the markets that they sell to. Two of our client managers are based in north Wales, and there is one client manager in Pembrokeshire, one in Swansea, one in Brecon and one in Cardiff. So, we can approach people locally and talk to them in a language that they will understand, namely a business language. There is someone to talk about corporate social responsibility, someone to talk about energy efficiency, and someone to talk about cash. My job is always to count the carbon, but we have people who can talk to them in a language that they understand.

[152] **Darren Millar:** I understand that. I am surprised that you have received so little WAG investment. You said that you receive around £4.4 million per year, which, given the priority that the Government says it gives to tackling climate change, seems to be small fry.

[153] You mentioned your work with public sector organisations, and said that you have a good relationship with local authorities in Wales and with the health service. I am particularly pleased about those relationships, especially given that whenever I go into a hospital to visit anyone it is always stiflingly hot and there is inevitably a window open on the ward letting in cold air. Do you think that it would be helpful for there to be a duty on public bodies to work with you rather than there being no obligation to work with you at all and it being of their own free will?

[154] **Mr Batt:** We are an independent company. I do not know how a duty to co-operate would be viewed. It is a hearts and minds issue. Legislative powers are great; if a duty were put on someone to come and work with us, we would work with them and do as much as we could. We would cluster them, share the findings and roll out models across Wales. The

greatest issue is that of hearts and minds. We see good opportunities to prove that saving energy is cost-effective for your business, whether it is in the private sector or public sector. That money can be utilised in any way that the business sees fit as none of the money is fed back to the Carbon Trust. Those are the big issues that win, along with corporate responsibility.

[155] We work with large cluster businesses, but we will work with businesses of any size in Wales. Some of the larger organisations, such as those in the public sector, have many employees. It would be great if we had the right questionnaires. We have a working relationship with the Energy Saving Trust and we can educate people in business and in the public sector and they can take that learning home and roll out those heating and lighting savings at home, not just at work.

[156] **Darren Millar:** It does not seem to me as though the level of engagement in the public sector is where it ought to be in terms of taking advantage of the services that you could offer. That was the point that I was trying to make. On the corporate social responsibility side of things, Alun Ffred asked earlier what legislative powers you would like to see the Assembly being able to use in the future. You talked pretty much simply about the planning system and public buildings and other things to which you could attach corporate social responsibility. Should there be other incentives—perhaps penalty systems—for businesses that fail to take their corporate social responsibility as seriously as they ought to? Would that not be a reasonable lever for Governments to use in order to ensure that there is efficiency and a reduction in carbon emissions?

[157] **Mr Batt:** I believe that the EU ETS and the carbon reduction commitment are there as instruments to put that in place in the future—to incentivise the good performers and penalise the poor performers.

[158] **Darren Millar:** What about the smaller businesses and the day-to-day operations of the bread-and-butter companies of the Welsh economy rather than the big boys out there? How do we make them take their corporate social responsibility seriously? We are not talking about the big plcs that have to produce a document that is available for public inspection, which may contain a paragraph or two pages on their corporate social responsibility. How do we make the small and medium-sized businesses across Wales take their responsibility seriously without just taking the carrot approach, which is effectively the financial incentive of saving money, increasing their turnover or whatever might happen as a result of the processes that you might introduce?

[159] **Mick Bates:** I think that he wants to say, ‘Get your big stick out’—more regulation.

[160] **Darren Millar:** I am just asking whether you think that it is a good motivator for small and medium-sized businesses.

[161] **Mr Batt:** As you rightly said, we incentivise businesses and encourage them to see the upside and to see climate change as an opportunity. We tell them that it will not penalise their business if they act sensibly and take the time and get themselves ready to be competitive in the market through energy efficiency.

11.00 a.m.

[162] Some small and medium-sized enterprises have been involved in the CRC that is coming in, but not all of them. Many small and medium-sized enterprises throughout the country do not have that many people and that much time to devote to new legislative practices, and that kind of thing. We are there to help to facilitate and move them forward to make those changes. There may be some background information—you should give me more

of what underlines your thinking. I do not believe that penalising businesses will help. We need to incentivise our small businesses to grow.

[163] **Darren Millar:** It is a good cop, bad cop thing.

[164] **Mr Batt:** One point in that is that many small and medium-sized enterprises throughout Wales feed into the supply chain for larger businesses and have working relationships with larger business. If they are not environmentally aware and not moving forward and taking serious action to reduce their carbon emissions, the corporate responsibility from the larger clients will feed down and work through the supply chain network. If they are not achieving the supply chain goals of their larger consumer, they will lose business so they need to take it as a straight business decision and take action.

[165] **Lorraine Barrett:** After Darren's four or five questions, have you done any work with—

[166] **Darren Millar:** Chair?

[167] **Mick Bates:** Just ask your question, Lorraine.

[168] **Lorraine Barrett:** Sorry, I should not have said that.

[169] **Mick Bates:** Quite. Thank you.

[170] **Lorraine Barrett:** Have you done any work with some of the large multi-national companies in particular? I have listened to the various presentations this morning, and I was thinking about all the television sets that are left on in superstores. If you think of all the retail parks, let alone towns and cities, there are massive electrical stores with 500 television sets on all day, and I think of us mere mortals who switch off the TV and the remote control setting every time, yet they are allowed to consume I do not know how much energy. I would have thought that there is a market there we should be starting to address. We talk about plastic bags, but I have not heard anyone talk about these television sets that are left on all day in all these stores. We are talking about stores that are open from 8 a.m. until 10 p.m. So, I am throwing something new in there and I just wondered if you had thought of it or whether you might think about it.

[171] **Mr Batt:** We have thought of it. The answer to the question on multi-national companies is that we handle those relationships throughout the UK with the most appropriate client manager. Much of the work with Corus, Tata Steel and the steel industry in Wales has been handled by one of our account managers in Wales and that has been active and rolled out across the rest of the UK. So, wherever the headquarters or the largest environmental impact of the company is, that is where that relationship will be. We also work with large superstores such as Asda and Tesco in addressing the issues that you mentioned.

[172] **Lorraine Barrett:** I will continue on that line—I thought about it this morning, and it is part of the jigsaw and something that we could look at through this inquiry.

[173] **Darren Millar:** I think that that is an interesting point. However, if a business is sourcing green energy there is no real problem, is there?

[174] **Mick Bates:** Reduction is the issue there, but, then again, there is a large economic driver and in the Carbon Trust's evidence the economic driver is the one that would take most businesses down that route. As you rightly pointed out, a 20 per cent saving equates to a 10 per cent rise in sales so we need to emphasise the economics of this.

[175] I will bring this session to a close now and we will break for 10 minutes or so. On behalf of the committee, I thank you for being here. Russell, I see that you have a pile of Carbon Trust reports with you.

[176] **Mr Davey:** Yes, I do indeed. They are base year 2003 Wales carbon dioxide and greenhouse gas emissions and base year 2002. Base year 2004 will be available soon and in that report it makes comparisons with the previous years when the data gathering became much more accurate. So, I will leave these with the committee.

[177] **Mick Bates:** Thank you and I wish you every success with further carbon reductions.

[178] **Mr Davey:** Thank you.

*Gohiriwyd y cyfarfod rhwng 11.05 a.m. a 11.23 a.m.
The meeting adjourned between 11.05 a.m. and 11.23 a.m.*

[179] **Mick Bates:** We now move on to our third witness this morning in our inquiry into carbon reduction in Wales. I see that there are quite a few guests in the public gallery. Translation is available on the headsets. Are you all happy with that? I see that you are all nodding; that is good.

[180] It is a great pleasure to welcome Helen Northmore, who is head of the Energy Savings Trust Wales. You have circulated your paper, so I ask you to begin by making an opening statement, on which Members will question you and make comments afterwards. Over to you.

[181] **Ms Northmore:** I thank the committee for the opportunity to participate in your review of carbon reduction. We have submitted written evidence, which I will not repeat in detail, but I want to take this opportunity to highlight our key points.

[182] You will have already read some of the many statistics that are used to discuss energy use. The figure that I still find astounding is that individuals are responsible for around half of Wales's carbon emissions through household energy use and road transport. The Energy Savings Trust estimates that energy efficiency measures and energy efficient behaviour can reduce an average household's energy consumption by approximately 27 per cent, indicating that there is still a significant carbon reduction to be realised.

[183] Our submitted paper focuses on the importance of behaviour change. The long-term future for energy efficiency in consumer markets will rely, to a large extent, on securing greater involvement of individual consumers and communities. The key to success will be to convert existing high levels of concern about climate change, energy costs and energy security into personal action. Our research shows that while almost 90 per cent of people recognise that action is needed to address climate change caused by their own energy use, only about 20 per cent are actively making significant changes to their own energy consumption. The task is no longer to persuade them that climate change is real and serious, it is rather to persuade them that individual and community action is a key part of the solution and that such action is not too difficult or expensive.

[184] The Energy Saving Trust has been the expert trusted and independent organisation, providing information for the public since 1993. We advise about 75,000 people a year in Wales through our network of energy efficiency advice centres. To address the increasing consumer confusion, increasing interest in low-carbon living and some gaps in current provision, the Energy Saving Trust has secured Welsh Assembly Government and DEFRA funding to launch our sustainable energy network. We currently provide energy efficiency advice to consumers, but, from December this year, we will be able to provide advice on

energy efficiency, renewables and low-carbon transport to consumers, community groups and to small businesses working in domestic premises. We have piloted this approach in other parts of the UK and have been able to deliver a step change in the number of contacts and the subsequent carbon savings. We believe that the sustainable energy network will be crucial in reducing consumer energy demand, while also increasing demand for micro-renewables, both of which will help to deliver Welsh Assembly Government targets.

[185] In our evidence, we also focus on the importance of housing and energy efficiency measures. Installation of all the measures that we identified, with the potential saving in households of 27 per cent, would not be sufficient on its own to meet an equitable share of UK climate change targets. The Energy Saving Trust believes that emissions from new-build housing need to be radically reduced over a period of time, requiring net zero carbon heating by 2015 and overall zero carbon housing by 2030. However, this will not address the significant issue of the existing private sector housing stock.

[186] Transport is responsible for 27 per cent of UK carbon emissions, with the vast majority coming from road transport. More than half of all journeys made by car are for fewer than five miles, and we believe that there is a significant carbon reduction potential in the transport sector. The promotion of energy efficiency is the direct responsibility of the Welsh Assembly Government, as well as housing, planning, transport, local government and the promotion of renewable energy. The Assembly Government has the ability and opportunity to provide leadership and support for energy efficiency and carbon reduction. The Energy Saving Trust has identified opportunities to deliver action at a local level that could have a significant impact.

[187] Local authorities are community leaders, as well as significant providers of housing and consumers of energy. Local authorities should be incentivised to promote the sustainable use of energy in the communities that they serve, by making carbon reduction in the community a target. Local authorities' role in promoting sustainable energy in their communities could also include the facilitation of energy efficiency in private housing, and such activity could be supported by a centrally financed fund for local authority council tax incentives for the installation of insulation.

[188] We all have anecdotal evidence that shows that involving children in sustainable issues can lead to behavioural change in the home. Recent research undertaken by the Energy Saving Trust, which will be published in two weeks' time, confirms that education has the potential to put in place the necessary foundations for delivering energy-related behavioural change. The report identifies the importance of schools having access to external resources, including trained professionals and access to additional support to help them identify the most appropriate resources. Current provision of additional expert resources for schools is dependent on proximity to a local or community resource, such as the West Wales Eco Centre or Awel Aman Tawe. There is no Wales-wide provision of additional expert resources.

11.30 a.m.

[189] On transport, a wide range of policies and initiatives is being employed elsewhere in the UK that can lead to carbon reductions. Investment in, and promotion of, infrastructure for walking and cycling, such as well-lit paths, cycle lanes and facilities for securely locking bicycles, encourage people to walk or cycle on shorter journeys. 'Smarter Choices' measures, such as workplace travel plans, teleworking, home shopping, car clubs and public transport information, can reduce the need for travel and car use. Consumer information and clear labelling on the lowest-emitting vehicles can help inform consumer choices when purchasing cars. Green fleet reviews, an Energy Saving Trust programme operating in England and Scotland, provide free tailored consultancy for organisations with fleets on how to reduce their energy use. We would like to see this programme rolled out in Wales. The promotion of

ecodriving techniques, such as adhering to speed limits, accelerating gently and reducing excess weight from the vehicle, can lead to average fuel savings of 5 per cent to 10 per cent. These messages can be promoted and they have been part of a campaign in Scotland, but this has not yet happened in Wales.

[190] In conclusion, I have identified the significant carbon reduction potential in encouraging energy-efficient homes, behaviour and transport use. The message that I want to leave with you is that it is up to the individual to change, but there are real opportunities for government at all levels to demonstrate leadership and support the individual in making lifestyle changes. There is still a genuine opportunity for Wales to be a leader in low-carbon living.

[191] **Mick Bates:** Thank you for the clarity of your paper and your presentation. We will now proceed with Members' questions and comments.

[192] **Karen Sinclair:** Thank you for that presentation, which was really useful. As you said, changing public behaviour is paramount to reducing carbon emissions, and capturing hearts and minds is absolutely imperative. What can the Welsh Assembly Government do to drive those changes?

[193] **Ms Northmore:** The Welsh Assembly Government's support for the sustainable energy network is a positive step forward. We are hoping to reach more than 200,000 people a year, up from 75,000. That will be a significant step forward. As always, we could do more if we had more funding. In particular, a lot of work could be done in the area of marketing and promotions, and we would like to do that to get these messages across. Working with communities as leaders, looking at exemplar projects, can really get the message across to individuals that they can make a difference. In terms of what else the Assembly Government can do, a key message is to work with local authorities, because local authorities are trusted leaders in their communities, and requiring local authorities to have targets and key objectives related to energy efficiency and carbon reduction would be really positive.

[194] **Karen Sinclair:** What about policy? What policy or legislative levers could help change people's behaviour? I was a little worried by the council tax and insulation idea, because there are people who are not best placed economically to make those leaps, and it is imperative that they are not punished for being in that position.

[195] **Ms Northmore:** There are means-tested grant schemes, particularly the home energy efficiency scheme, which would support those people in particular if they are looking at insulation. However, on your question about levers, some of the proposals coming forward are key. Planning and building regulations are a legislative driver when it comes to new build particularly. There are opportunities to look at refurbishment using planning regulations and the extension of permitted development rights. For example, looking at making it easier for people to install renewable technologies in their homes is key and, again, that is a proposal that is coming forward. Those are the main two at the moment, otherwise it would become too prescriptive about the way that people live their lives. A lot can be done at a UK level, and that is the responsibility of the UK Government, which is looking at things from car manufacturers to requiring the abolition of standby buttons or looking at light bulbs. However, those matters are on a UK level rather than being particularly Welsh.

[196] **Karen Sinclair:** To follow that up, we know about the availability of grants, but an awful lot of people who could do with a grant do not. We spend a lot of time promoting grant schemes to people in our constituencies, but how could we improve on that? Presumably, local authorities could play a much bigger part in promoting the availability of grant schemes.

[197] **Ms Northmore:** Local authorities can play a bigger part. At present, the Home

Energy Conservation Act 1995 requires local authorities to report their figures, and so appoint a HECA officer. However, at present, most local authorities in Wales do not even have one full-time member of staff dealing with energy efficiency, HECA, and carbon reduction, so there is a real limit as to how much time that one person, where it may only be half or a quarter of their responsibilities, can deal with phone calls from the public or go out to promote grant schemes. Our energy efficiency advice centres, and therefore our sustainable energy network, will signpost people to grant schemes, where they are eligible; we refer many people to the home energy efficiency scheme, and to the energy efficiency commitment grants. With the sustainable energy network, we hope to be able to do much more outreach work, going into communities, and be able to get to those much harder to reach audiences, to promote what is out there and what is available to them.

[198] **Alun Ffred Jones:** Are there any specific measures or legislation that the Government or the Assembly could introduce to reach the goals that you set out?

[199] **Ms Northmore:** Looking at building regulations, we have the Assembly Government statement of aiming for zero carbon new builds by 2011. That will require the devolution of building regulations. Devolving building regulations to Wales gives the Assembly Government the opportunity to go further and faster than the UK Government, and to look at requirements not just for new build, but for refurbishment, which would be a real opportunity to raise the standard of the private housing stock.

[200] **Lesley Griffiths:** I hope, Helen, that you can give me a simple answer to this question. What is the difference between carbon neutral housing and zero carbon housing?

[201] **Mick Bates:** I hear a deep intake of breath. [*Laughter.*]

[202] **Ms Northmore:** At present, there is not a final, formal definition of 'zero carbon'. However, if I were trying to explain it to my friend in the pub, for example, I would say that, unofficially—because I do not know the correct terminology—zero carbon is where the house does not require any significant offsetting to reach zero carbon; if it is carbon neutral, you have to look at offset, but if it is zero carbon, you are looking at much lower, almost zero, emissions. That is an unofficial definition, but that is how I understand it.

[203] **Mick Bates:** It may be unofficial, but it is on the record now. [*Laughter.*]

[204] **Lesley Griffiths:** You mentioned the Welsh Assembly Government's aspiration as regards zero carbon housing by 2011. How do you believe that fits in with the projections that you have mentioned?

[205] **Ms Northmore:** When working with Government, we have looked at 2016 as a realistic date for zero carbon new build, partly due to the level of technology that is currently available and the speed with which building regulations would have to be changed. Therefore, we welcome the Welsh Assembly Government's aspiration, and we would welcome any further progress in trying to reach the target before 2016. However, we have been working with the industry and with Government on that basis.

[206] **Brynle Williams:** Bearing in mind that the three devolved issues are the transport, residential and agriculture sectors, what policies could the Welsh Assembly Government introduce, either within its current powers or within the devolved framework, that could have a significant impact on carbon emissions in these three sectors?

[207] **Ms Northmore:** I will have to think about that one.

[208] **Mick Bates:** Of those three, perhaps you could concentrate more on the domestic

resource side.

11.40 a.m.

[209] **Ms Northmore:** In our presentation, we focused on transport, local government and education as three key opportunities for the Assembly Government, and I would definitely stick with those. There is a lot that can be done, not necessarily legislative, but in policy, strategy, support and funding—particularly in the areas of education and transport. With local government, it is more about looking at the opportunities the Assembly Government has to require local authorities to make carbon reduction a priority, to set targets and incentives.

[210] **Brynle Williams:** Briefly, the problem is that transport in Wales—a rural country—is a major industry. A car is not a luxury in isolated villages, and so on. Should we look more towards working from home, using IT such as videoconferencing? We need to address these problems for rural areas, and we must remember that there are an awful lot of people living there. What are your views on that? How can we drill down to that?

[211] **Ms Northmore:** You mentioned working from home, internet working and teleworking. Those are key opportunities to save people having to travel to work by car. Obviously, people will use their cars in rural areas, where they have to, so we would recommend promoting eco-driving, which is not stopping people driving, or asking them not to drive, but looking at how and what they drive. It reduces the impact when they do have to get in the car, because we recognise that sometimes people have to do so. We are not saying that people should not do it; we are saying that they should think about the engine size that they need, the car that they buy—whether it is modern and efficient—and the weight carried in the car, which affects petrol consumption, and tyre pressure, and adhering to speed limits, because you can save approximately 20 per cent of your fuel if you drive at 65 mph instead of 80 mph.

[212] **Brynle Williams:** One small question: I was rather disappointed to read last week that the capacity for heavy goods vehicles will not be increased from 44 to 60 tonnes gross. That would have meant that for every three such vehicles, you would take one off the road. What are your views on that? Is it eco-friendly?

[213] **Ms Northmore:** On the whole, we do not deal with heavy freight, so I do not have that information. I can come back to you on that.

[214] **Brynle Williams:** Thank you, Helen.

[215] **Alun Davies:** Thank you for your presentation. You talked about what Government can do, but can you tell us where, in your view, the Welsh Assembly Government is succeeding?

[216] **Ms Northmore:** The Assembly Government has nailed its colours to the mast with the announcement on the 2011 aspiration for new-build housing. It said clearly that it wants to focus on the standard and quality of homes, and reducing emissions, and we want to do that as soon as possible. That is an incredibly positive statement and aspiration. Then there is the Assembly Government's support for our sustainable energy network, which is actually rolling out ahead of the rest of the country, and the financial support that we have received, because the Assembly Government believes that it is the right thing to do. That is extremely positive, and we are grateful for that. It will lead to significant carbon reductions, and we are expecting to reach three times as many people, and encourage them to take action; so, that is a positive thing that the Assembly Government has done.

[217] **Alun Davies:** In terms of the environment strategy, how do you think that that is

having an impact upon public behaviour in the areas that you have discussed this morning, and how realistic do you see the action plan as being? Do you think that it is being met at the moment?

[218] **Ms Northmore:** At the moment, the majority of people who call us do so for financial reasons—they want to save money on their energy bills. That has been the main driver for many years, and still is. We see an increasing number of people contacting our energy efficiency advice centres who are concerned about their carbon footprint, and about their impact on the environment, and what we would like to see over the next few years is for that to become the majority view, rather than people just calling us because fuel prices have gone up. I will have to come back to you on the action plan.

[219] **Alun Davies:** Finally, you say in your paper that you would like to see increased support for microgeneration. What sort of increased support would you like to see?

[220] **Ms Northmore:** The microgeneration action plan for Wales has a number of actions that will support the development of the industry and the development of demand. However, a UK grant scheme called the low-carbon buildings programme is open to householders, businesses and public-sector organisations to look at installing renewable technology in the home or in the business. There are concerns that Wales has not been receiving enough benefit from that programme—additional programmes run in Scotland and Northern Ireland focus not just on handing out money, but also on developing projects and increasing knowledge in local communities and for individuals. We would like the Assembly Government to look at that, to see how we could get the full value from grant programmes, looking at the possibilities to improve access to such grants and to information.

[221] **Alun Davies:** Is it your view that the current microgeneration strategy does not achieve that?

[222] **Ms Northmore:** The current microgeneration strategy is looking very much at industry, development and information levels. What I have just talked about would be in addition to that, because we think that it would add significant value to the existing plan, which will increase demand. The public information campaign listed in the microgeneration action plan will increase the general public's knowledge, and what we are looking for, in what I have just discussed, is something more targeted, perhaps looking at communities and generating projects, rather than just giving out information.

[223] **Mick Bates:** The microgeneration plan itself does not have any financial support attached. So, it is really a matter of awareness and direction rather than investment in particular actions with funds.

[224] **Darren Millar:** You mentioned at the start of your presentation, Helen, that 90 per cent of people recognise the need to address climate change and to take action but that only 20 per cent are actually doing anything about it. A huge number of people recognise that there is a problem, but they are not taking any action. In your submission, you talk about the need to educate not just adults, but also children. As I understand it at the moment, your organisation does not have responsibility for educating children or for rolling out an education programme to children so that they can perhaps influence their teachers' and their parents' behaviour. We all know how good a little Hitler around the house on climate change might actually be in helping to encourage parents to address or adopt certain behaviours. That is interesting terminology, but perhaps useful.

[225] **Mick Bates:** Attila the Hun will be there next year.

[226] **Darren Millar:** Is there any suggestion that you might want to give to help to tackle

that?

[227] **Ms Northmore:** At the moment, we are not funded to work in the area of education. Some local and community groups work with schools, and some local authorities do fund work through our energy efficiency advice centre, but it is extremely patchy. We believe that the Assembly Government should be looking at this area, and we know that there are moves in the curriculum to look at sustainable development and global citizenship, but the report that we are about to release shows that Wales does not have the additional expert resource for schools to tap into no matter where they are. We would like to look at developing a programme for that.

[228] **Darren Millar:** So, is it fair to say that you do not think that enough is being done to engage youngsters in the need for personal action at the moment?

[229] **Ms Northmore:** Not at the all-Wales level. Good work is being done in particular areas, and we would like to see every school have the opportunity to access resources and support for sustainable development messages in the curriculum.

[230] **Darren Millar:** Can you confirm, as mentioned in your report, the need perhaps for the breakdown of targets in order to give specific targets, for example, for carbon reductions from transport, from housing and so on? You see that as a better tool for achieving some of the bigger targets and aspirations set by the Welsh Assembly Government.

[231] **Ms Northmore:** Our current way of collecting statistics and information, and how that informs our research policy and information, is looking at where the current emissions come from, which is why we have broken it down into household and transport. The report shows where we get those statistics from. That is why we have done it. We cover renewables, domestic energy efficiency and transport, so we want to know what the different size targets are and what the work is, essentially. That is why we have done it to date.

11.50 a.m.

[232] **Darren Millar:** This is my last question. Earlier, we heard evidence from Environment Agency representatives on this matter. They suggested that it might be useful if carbon impact assessments were done on all new policies that the Welsh Assembly Government introduced—for example, the concept of treatment miles in the NHS. If you are going to encourage people to travel for services, perhaps there should be a carbon price attached to that. Would you support that?

[233] **Ms Northmore:** That is a very interesting idea. We would like to have a further look at it, but it could be considered for the future, because things like treatment miles, in particular, will have an impact on costs for patients and staff.

[234] **Karen Sinclair:** You talked about new-build housing and the ability to make changes at the building stage, with building regulations, especially if we took control of that here. However, more and more people, instead of moving, are extending their homes and, for the majority of people, that means accessing an SME, for example, an architect. Those businesses tend to work very much in isolation, because they are small businesses—I do not want to denigrate architects; they are brilliant. Should we consider directly targeting architects, who will be working with the general public as they extend their homes, to inspire people to take up more and more measures that will be of benefit, such as insulation and so on?

[235] **Ms Northmore:** Again, that is an interesting idea. Another way that you could look at doing that is by informing the public that there are opportunities, when extending, to reduce their energy bills, in particular. So, they may contact our energy efficiency advice centre,

looking for information on their bills and we could also inform them at that point that, if they are looking at extending, there are different opportunities available to them. As I understand it, architects have to complete continuing professional development, and that could be a way of promoting the opportunities that are out there.

[236] There is also the issue of planning guidance and looking at building regulations, once devolved, requiring better standards.

[237] **Karen Sinclair:** Building regulations tend to be minimum standards, do they not? I was talking about standards that are better than that. Architects have to know what the minimum standards are but becoming au fait with all of the new possibilities coming online through career development might work.

[238] **Mick Bates:** On behalf of the committee, I thank you for your evidence and answers to our questions this morning. I now invite Peter Davies from the Sustainable Development Commission to the table to give his evidence. I was very taken with your idea of making local authorities more responsible, Helen. In a couple of weeks, we will be talking to representatives of the London Borough of Merton and it will be interesting to hear their evidence.

[239] I welcome Peter Davies, who is the Commissioner for Wales at the Sustainable Development Commission. We have received your submission, Peter, and the document 'I Will if You Will: Towards Sustainable Consumption', which is very interesting. I invite you to make a short presentation—I am sorry, I have forgotten to introduce Sarah. We extend a warm welcome to Sarah Samuel, who is team leader for energy and climate change. I invite you, Peter, to give us a presentation, after which there will be questions and comments from the committee.

[240] **Mr Davies:** Thank you for the opportunity to have this time with you. We wanted to take a slightly broader view and put the discussion in the context of sustainable development and, to do that, I want to spend a little time on an introduction talking about the Sustainable Development Commission and its role, and the framework of sustainable development. Secondly, I will look at the framework for Government action that we feel has been proven as a model for change. I will then move on to the concept behind 'I Will If You Will: Towards Sustainable Consumption', and I hope that you have had a chance to look at that report. Finally, I will look at some of the key issues for your discussions on policy areas.

[241] I will begin with the context in terms of sustainable development and the commission itself. I am sure that you are all aware of the Sustainable Development Commission, which was set up in 2000 to provide independent advice to Government, and advocacy and scrutiny in respect of Government across the UK. The commission reports to the Prime Minister and the First Ministers in devolved administrations. The framework within which we operate is set out in the 'Securing the Future' White Paper, as are the principles of sustainable development, which the devolved administrations, the First Ministers and the Prime Minister signed up to, as a framework within which Government should operate across all of its policy areas. It is probably important to highlight the fact that the principles in that paper provide the framework within which the Government has committed to operate across all of its policy areas. Whether those principles are actually being implemented across all of its policy areas may be an interesting area for later discussion.

[242] The SDC, as you are probably aware, also produces significant independent reports for Government and provides platforms for advice on policy development. This week, we have published 'Turning the Tide: Tidal Power in the UK', a report that includes a little bit about the Severn barrage. Last week, we published a report on Ofgem. Sarah, who is here with me, was responsible for the team that led both pieces of work, working with the

commissioner. I am the commissioner for Wales, but there are 18 other commissioners with specific areas of responsibility. As a commission, we work with the secretariat to produce the independent platforms of reports for Government and policy advice.

[243] We also undertake a scrutiny role, and it is worth highlighting the fact that we have just completed the first assessment of the Scottish Government's approach to sustainable development. We have just produced that for the Scottish Government. We have extensive experience of working with Governments across the UK and through our European networks. We fed into the process that developed what is termed 'the four Es', which is mentioned in our paper. It is a framework for action by Government that can catalyse, break habits and kick-start change. It talks about the enabling role of Government, the engaging role of Government, Government as a leader in exemplifying practice, and Government as a process of encouragement to practise. We feel that, to mobilise change in sustainable development and to tackle climate change, we have to look at combining all of those elements. There is no silver bullet, no one hit, and I should say that the Severn barrage itself will not be one hit or a silver bullet; it is about a combination of the factors that we are looking at.

[244] Climate change and the need for carbon reduction, which is the topic under discussion today, are the symptoms of unsustainable lifestyles and an unsustainable society. It is important to recognise in your deliberations that we have to move from the current levels of consumption and production to more sustainable levels. There is a role in that process for all elements of society. We talk about a triangle of change: people, Government, and business. The 'I Will If You Will' report really takes you through it. We have sent you a copy of the summary, but I would also recommend that you read the full report. It takes you through a lot of detail and it brings together a lot of the research on how we can bring about the necessary changes in behaviour. The Government's role is crucial in exemplifying that change. The public sector plays a significant part in Welsh life and the key role for Government is leadership in that sector, across all elements of it. We must recognise that there is a lot of evidence that people do not necessarily trust Government, unfortunately.

12.00 p.m.

[245] There is also a lot of evidence that people do not like to be made to feel guilty or somehow harangued or even nagged about things. We must make this a positive process that engages people. We know that people want to do the right thing, but there is a values-action gap. It is about information—better information on electricity bills and about household energy use that is accessible to the end user. However, it is also about establishing strong community networks that allow people to work together. That is critical. When I was waiting to come down to the committee room, I was watching television upstairs with a crowd of people. The Betws Women's Institute was visiting, and they were quick to tell me that they have sponsorship from Marks and Spencer to enable them to undertake their own carbon footprint analysis. They had all done it, and it was part of the work in Betws by the WI, as a community group, on carbon reduction in that area. That is a great example of behaviour change and leadership from community groups.

[246] The 'I Will If You Will' report is very important, because we must create that consensus. We need to talk about lifestyle choices, and be conscious that small-scale solutions are critical to this. Government—as with the Severn barrage, which we keep mentioning—is quite fond of big projects. Big projects have their place, but this is about change on a small scale, a local level, that we can support and enable. It has to be possible to see a value, in terms of quality of life and lifestyle, in what a change brings. You cannot actually see the benefits of reductions in carbon emissions—except in terms of cost reductions—because you cannot see how much carbon dioxide you have saved. I often talk about WeightWatchers. WeightWatchers is a very effective process of peer change. People pay to attend a group to measure each other and to reduce their weight. We could apply that process to carbon dioxide

emissions, except that it is very difficult to see physically what you have lost in emissions as compared with weight. However, there is a lesson to be learned from the WeightWatchers approach to change.

[247] Turning to some specific issues, we need to create a consensus. The climate change commission set out in the 'One Wales' document is very important in creating a leadership consensus across Wales. For example, Woking is a small local authority that has made huge changes, including 60 to 70 per cent savings in its carbon dioxide emissions. It established a cross-party consensus in the early 1990s to enable that change to happen. There were some difficult decisions to be made, but it never became a political issue. It is very important that we establish that consensus, and a climate change commission might achieve that.

[248] The 'One Wales' document also highlights the importance of green jobs. I would argue strongly that we should be talking about low-carbon jobs, not green jobs. Green jobs are often perceived to be jobs in the green environment, on the land. We should be talking about how to create low-carbon jobs, and that strategy, which is there to be developed, should be a low-carbon jobs strategy. The marketplace of the future will be a low-carbon marketplace. Farmers will be selling into a low-carbon marketplace. There will be economic advantage for the farming community if it can show that its products are low-carbon products, and we need to support it and doing that. Equally, we have talked about construction skills. We have an ongoing exercise called product road-mapping, which takes businesses through an assessment of their products, to produce products for the low-carbon marketplace of the future. You have talked about the Carbon Trust's input with regard to its investment in such developments.

[249] I know that you will be taking evidence from the expert panel on resource management, and I strongly commend its work and its recommendations. It is an excellent piece of work that was carried out over two years, and I am sure that you should take on board its key recommendations. I have mentioned the importance of public-sector action and leadership, and the report by the expert panel highlights the importance of carbon as a key indicator.

[250] I think that we should be looking at establishing carbon budgets alongside the financial budgets, so that you formally budget for carbon and can manage that in the same way as you can manage financial budgets, building in carbon price. The three key areas in the Stern recommendations are that the solutions are around pricing carbon—taxation regulation—technology, and behaviour change.

[251] Lastly, in terms of bringing this all together at the grass-roots level in sustainable communities, our report, 'Sustainable Development in Wales: From Pioneer to Delivery', which looked at the effectiveness of the Assembly Government's process on sustainable development, talked about moving from the pioneering stage to delivery. It was backed up by a piece of work by the Bevan Foundation more recently, which talked about grounding this at sustainable community level. As members of the Betws Women's Institute mentioned to me earlier, we generate a lot of hot air on this subject, which we do not necessarily measure. So, we need to ground sustainable development at the community level.

[252] So, there are no quick fixes; it is a combination of elements, as we have set out in the paper. It is about applying those principles across all Government policy.

[253] **Mick Bates:** Thank you, Peter, for your excellent presentation and paper, which raise a great number of issues and some challenges for us all. Lesley will ask the first question, which is equally a great challenge.

[254] **Lesley Griffiths:** You mentioned Stern's recommendations. How would you rate the Welsh Assembly Government's performance in reducing carbon emissions?

[255] **Mr Davies:** As with all of us, there is a long way to go. The ‘From Pioneer to Delivery’ work highlighted the obvious commitment and enthusiasm and the pride that exists at an official level towards sustainable development. However, it is difficult to translate some of that into deliverables on the ground. That is now the challenge. The frameworks, the policy gateway tools, and all those sorts of process issues are there. So, we now need to look at the levers of change, which, as I have tried to highlight, are the mix. That is where we possibly have not got it right yet; we do not have that balance of mix. A politician, not in Wales, said to me the other day, ‘We know what the right thing to do is, but, if we do it, we will get voted out’. There is an important point in that. So, we have to work to create the space to allow the right things to be done by politicians as well as by people in businesses and communities.

[256] I also feel that there has been too much of a tendency for organisations—and I include my organisation in this—to stand on the edge and criticise the fact that not enough is being done. Not enough is being done, but we know that it is pretty tough to do things, so we have to work with others to get those things done.

[257] **Mick Bates:** I think that Stern made a recommendation about Government expenditure to combat the impact of climate change on the economy. Do you know what that figure is in Wales?

[258] **Mr Davies:** I do not know. Stern recommended 1 per cent of GDP, but I do not know how that translates for Wales. I would warn that, in interpreting that, there is a danger that we will create separate budgets or activities; we must not do that. This has to be across the board. So, let us not create a budget for tackling climate change in a pot somewhere; let us make sure that there is action across the board.

[259] **Alun Ffred Jones:** Gofynnaf i chi edrych ymlaen at y dyfodol. Pa fath o le fyddai Cymru pe baem yn llwyddo i leihau allyriadau carbon deuocsid 80 y cant, sef argymhelliad Stern? **Alun Ffred Jones:** I ask you to look to the future. What kind of place would Wales be if we succeeded to reduce carbon dioxide emissions by 80 per cent, which was Stern’s recommendation?

12.10 p.m.

[260] **Mr Davies:** I think that is an exciting vision. There is a view that the future is a hair-shirt future and that we will all be living in caves. We may all be living in caves if we do nothing about the problems that we are facing. However, a low-carbon future will bring an opportunity for high-quality jobs. We can highlight businesses in Wales that are already producing low-carbon products and services for the future, which will be the jobs of the future. It will bring a better quality of life and one that means that you are not stuck on the M4 for hours. The farming community, which is important to Wales, has an important leadership role to play in this agenda, and we should engage the farming community in this, because the products of that farming community are already of a high-quality and can be even lower in carbon emissions. We can lead the country in terms of the products coming out of Wales, whether from the farming community or from the manufacturing sector. I see the future as being about ensuring that people have high-quality employment, a good quality of life in communities that are more connected, and a better level of wellbeing than we do today. So, I see the change as being a change to a better society, not one where we simply do not have the capacity to do anything and we are all living in caves.

[261] **Mick Bates:** On that point, the Stern report recommends a carbon reduction of 80 per cent by 2050, whereas the current target is 60 per cent by 2050. What is your view on that?

[262] **Mr Davies:** The commission does not, as yet, have a formal view on that, but I think

that it is likely that we will concur with that. I know that the Joint Committee on the Draft Climate Change Bill is being asked to look at that. That probably will be adopted, and that should be the recommendation. We have to front-load it in the sense that the action has to be in the next 10 to 20 years. We should not think that we can do it at the end.

[263] **Brynle Williams:** It is pleasing, as a farmer, to hear that you are fully supportive of Welsh agriculture. I do not know whether you would like to comment on this, but I see the biggest problem as trying to get over the retail aspect and to realise that there is a moral obligation, as far as profit is concerned, to localisation. We have had 40 or 50 years of cheap imports, irrespective of whatever. How can we change? We are moving slowly. Climate change is moving quicker than we are as a species. How do we progress this? I asked the previous speaker about the role that we can play in the rural community. We need to make more use of electronic equipment—for example, could Members from north Wales meet with other Members here using videoconferencing equipment as opposed to commuting to Cardiff every week?

[264] **Mr Davies:** I have a lot of sympathy with that point. I live in the far west of Wales and it is a real challenge to get a videoconferencing facility set up so that I can have a videoconference rather than come to Cardiff. We need to make things ‘citizen-easy’—that is a phrase used in Wokingham. It is not easy. One of the disappointments of the transport announcement this week was that we had not included some of the issues in terms of the use of technology to reduce transport use. I would certainly highlight that.

[265] Rural Wales is important. I have highlighted agriculture; I would also like to highlight the towns. The transition town movement will get its grip in rural Wales in towns such as Lampeter, which can lead the way. Coming back to your first point, it is a mix. Consumers are increasingly making demands of retailers.

[266] On the requirement for information, there is voluntary action. For the last 12 months, I have had the opportunity to sit on the 2020 group, which looked at the future of agriculture in Wales. One recommendation of that group was that all public bodies in Wales should be required, where we have the power, to publicly report on the percentage of local food used in their services. There is also more that we can do in terms of working in partnership with the supermarkets. Although the supermarkets have some challenges—while I mention them, we are producing a review of supermarkets, which will be out in November and which I think will be important and relevant to this agenda; I hope that we can bring it back to you—there is increased work going on with the likes of Tesco, which is labelling its products in terms of carbon footprint. It is a challenge, and the Carbon Trust is working with Tesco on it. You will know better than I that the New Zealanders have got their retaliation in first, as they tend to do, by saying that New Zealand lamb has a lower carbon footprint than Welsh lamb. I do not think that we actually believe that, but we must show that it is not the case and communicate that to the consumer.

[267] **Mick Bates:** Thank you very much.

[268] **Alun Davies:** Thank you for your remarks this morning. However, do you not think that we need a reality check on some of these issues? You answered Alun Ffred’s question with a picture of Wales that was motherhood and apple pie—high-quality jobs and everyone involved in the green economy. The reality for many of the people whom I represent in Milford Haven, for example, is that we have seen the figures this morning on where the emissions are, and we are talking about industry. The shortcut to a carbon-free Wales is essentially through an industry-free Wales.

[269] **Mr Davies:** I probably slipped into the danger of giving a motherhood and apple pie response to the earlier question. I suppose that I was projecting myself 50 or 100 years hence,

because we start where we are now. The reality, as highlighted in 'I Will if You Will—Towards sustainable consumption' highlights this, is that, for many people in Wales, survival on a daily basis is their one and only priority. We must recognise that, and one dimension of sustainable development, which is why I emphasise the importance of the framework, is social justice. Social justice, environmental limits and sustainable economies all go together so we must recognise that dimension. I believe that business is part of the solution, not the problem. The businesses that we are fortunate to have in Wales such as those businesses in Milford Haven, which are global leaders in energy production, are not the problem but the future solution. As a people in Wales, we should be working with those companies on solutions. There is a tendency, which you have probably highlighted, for people involved in the so-called sustainable development movement to see businesses being the problem rather than the solution. We need to work with the existing business community in Wales to move that agenda forward. So, I take your point.

[270] **Alun Davies:** Do you think that that is happening at the moment?

[271] **Mr Davies:** I think that more could be done on that, and it is noticeable when you go to various sustainable development meetings around Wales that you tend to see the same faces, and you tend not to see faces from business. The Scottish Government has supported the setting up of a business delivery team, chaired by one of the leading businesses, with a group of significant business leaders, which is creating a consensus for business to lead on this change in partnership with Government. We have an opportunity to do that in Wales—there is a business summit on climate change on 7 November, and that could be a platform that creates that type of leadership change that we need. However, I think that there is a gap at present.

[272] **Alun Davies:** You say in your written submission that one of the key drivers in the requirements to achieve these changes is through the integration of work at different levels of government in Wales and the UK. Do you see that integration at the moment?

[273] **Mr Davies:** One of the values that the Sustainable Development Commission brings is the connection to other Government work, whether in Whitehall, Scotland, Northern Ireland or in other parts of the European Union. We need to do more to identify best practice in similar states or devolved administrations or small part-states of Europe that we can learn from in Wales. That is something that we can do as a commission. To be clear on the answer, I would probably say that there is not enough transfer of learning as it stands, but we have a responsibility to improve that too.

2.20 p.m.

[274] **Alun Davies:** How do you think that we could promote greater integration?

[275] **Mr Davies:** I think that that is down to the ability to exchange. We would certainly say that it is important for there also to be a physical exchange despite the fact that that physical exchange might cause carbon emissions and some of the media may pick up on the fact that Assembly Members are creating carbon emissions, but I think that it is critical that we have that physical exchange. I am leading a study visit to Sweden in a few weeks' time to look at what the Swedes are doing on sustainable development and enterprise. It is so important that we learn lessons from other people and physically look outside Wales for that. I am sure that this process that you are undertaking will help with that.

[276] **Alun Davies:** This is my last question, Chair. Do you think that the UK Climate Change Bill will help the integration of policy? I am concerned about the integration of policy on a UK and devolved administration level.

[277] **Mr Davies:** I think that you are right to be concerned about ensuring that that happens. I am not sure whether I have an answer to the question on whether it will happen. We need an integrated approach at all levels, including at a very local community level, because I see local community groups doing great stuff and the local authority not being engaged with it. It is the same at a national level, at the UK level, as well as at the European level. We have to make those connections.

[278] **Karen Sinclair:** I have two points. Your Weight Watchers analogy was quite right, because communities can make a significant difference as a whole, but the impact as an individual is hard to measure. I read through your documentation, which shows people as part of something bigger. There is certainly work going on in some areas, but the examples that you have used are in England. Is there work going on here that could be rolled out and measured so that people could see what they are doing? That is my first question.

[279] My second question is on fireworks, which are becoming increasingly popular—Lesley pulled a little bit of a face, as she likes these. I am not talking about little fireworks, but huge displays for weddings and all sorts of functions. Are they making any significant impact or is the impact so small as to be insignificant? I can see them being rolled out more and more, certainly in the Llangollen valley, where there are many hotels. Very rarely does a weekend go by without a pretty big firework display. With that growth, should there be some mention of checking it or is it not that important?

[280] **Mr Davies:** That is a very interesting question. To go back to the first question, I must say that that report, although I think that it is a good report, predates my role in Wales. It does not include any Welsh examples, but I can hold my hand up and say that there will be some included next time. There are Welsh examples and in fact I will connect the two answers in the example of a community energy network in Pembrokeshire. It is being co-ordinated by Planed, which is a community development group in Pembrokeshire. There are many such groups working in Wales, creating this sort of community-led process. So, there are some great examples and I know that the Assembly Government is planning to pull together those examples. I think that two conferences are being planned to try to pull things together and try to share some of this good practice.

[281] Interestingly, last weekend, Planed organised one of the biggest firework displays held in Wales in Milford Haven. It was part of a festival that was about pulling people into Pembrokeshire at the end of the season to extend the season, so it was related to economic development. I do not know the answer to your question about the carbon impact of fireworks. It is something that we should get the answer to because this is growing in importance. There is probably a broader question there. I have received a submission from a farmer in mid Wales—and I probably should not go into the details of this—talking about a particular development that will generate quite a bit of carbon dioxide emissions and which there is a question over. His question to me was that, surely, planning should take into account the increases in carbon dioxide emissions caused by a development in a particular area. I may be wrong about this, but I do not think that we take that into account. So, your point about fireworks probably is a broader point that could be looked at in the same context.

[282] **Darren Millar:** I have a couple of brief questions. You mentioned Betws WI at some length in your presentation, and I am impressed that its members have taken climate change and the work that is being done so seriously. What can we do in Wales to encourage more voluntary sector organisations, churches, faith groups, and so on, to engage in the process of living more sustainably and to do their bit? I assume that they have a good education role and could influence people's behaviour.

[283] **Mr Davies:** I always say that it is women and children that will save the world and that it is the stupid white men who have caused the problem. You talked about education and

about women and women's groups particularly, which are important. The WI, in general, has done a significant job in this respect. I would be wary of initiatives that are funded on a Wales-wide basis and somehow bypass local groups. There is some evidence of the fact that change can happen best at the local group level, but, often, those local groups are not supported, and the funding streams filter down through Wales-wide organisations, which suddenly parachute into an area someone who is going to do something for that area. We need to watch that, because the Government's enabling role is critical and it needs to enable at the local level rather than impose.

[284] **Darren Millar:** In your response to Brynle and during your submission you talked about agriculture. In your paper, you suggest that a carbon trading scheme could be introduced for agriculture and that the feasibility of that should be looked at. What concerns me about that is the potential administrative and bureaucratic burden that it might put on an already overburdened sector. How do you see us getting around that?

[285] **Mr Davies:** My experience is that the farming community is engaged with the climate change issue and it sees the opportunities in respect of changing products—changing what is being grown and reared. Therefore, farmers understand the opportunities, but they also understand the threat. They are also interested in microgeneration, and we could really make huge strides on microgeneration if we work with the farming community directly to support it in that regard.

[286] The whole carbon offsetting issue is a difficult and controversial area, but we should not ignore it because Wales may be able to make a contribution in a creative way. It is controversial, but we should consider it in terms of taking a fresh look at voluntary, assured carbon offsetting, and the farming community also has a role to play in that.

[287] Again, you might want to look, as a committee, at the recommendations of the 2020 group. There are specific recommendations on carbon neutral farming, and that will be followed through beyond those recommendations.

[288] **Brynle Williams:** My question is on the methane and nitrogen problem related to agriculture, the storage of slurry, and so on, and the fact that Wales is now a nitrate vulnerable zone. Do you think that we should get more assistance in this regard, for example to put in methane plants, because that may have a major role? Farms are getting a lot bigger, so we have higher density stocking. Should the Government do more to help us in that respect, as we would be doing two things, namely creating energy and taking out greenhouse gases?

12.30 p.m.

[289] **Mr Davies:** I am in danger of repeating myself about working with the farming community to tackle those sorts of issues, but why do we not have a network of biodigesters around Wales? There are hundreds, if not thousands, in Germany, while we have only a handful. So, we need to look at how we could introduce those and support their introduction across Wales. On land-management issues, we have some outstanding examples—of which the Chair will be well aware as they are in Pont Bren in his area—of farmers leading the way in land management and delivering value down the valley in the lowlands by preventing flooding through effective land management. They need to be rewarded for that effective land management, not necessarily through a grant, but maybe through utilities paying for the flood management processes that they are putting in place.

[290] **Mick Bates:** Thank you for your paper and evidence this morning and for your answers to the questions put to you. Finally, we have talked quite a bit about carbon appraisal and the carbon footprint of particular activities or products. Do you have information that would guide us on renewable energy sources, such as wind power or photovoltaics? Are these

renewable energy sources all footprinted? Do you have figures that show, for example, how long wind power takes to offset the carbon needed to produce the turbine? Are those figures available to us?

[291] **Ms Samuel:** We can certainly help you on wind power, as we completed a report on wind power in the UK a couple of years ago. I am not sure whether we have the numbers on the other technologies, but we may be able to help you. So, I will come back to the committee on that.

[292] **Mick Bates:** That would be useful information, because, as part of our scrutiny, we will move on to various topics after today's introductory remarks. I thank you very much for that and I look forward to any further communications between us.

[293] For the benefit of the committee, I mentioned that Friends of the Earth Cymru, Wales Environment Link and the Centre for Alternative Technology will be giving evidence at next week's meeting on 11 October. The week after that, on 18 October, we will have the Energy Retail Association, we will link up with Italy to talk about the EU sustainability housing in Europe project, and, interestingly, the London Borough of Merton and Woking Borough Council, which are tremendous examples of how to operate, will give evidence. In what will possibly be the final session on 25 October, the National Federation of Builders, the Welsh Local Government Association, Community Housing Cymru and the Confederation of British Industry Wales will give evidence. After that, we will look at the recommendations and evaluate the process so far.

[294] An interesting point raised this morning by the Environment Agency is the fact that it has undertaken a measurement of its own carbon footprint, and I would like the committee to think about whether we should undertake that process individually, and collectively as a committee. It would be interesting to see the result of that. There is nothing to be embarrassed about, and there are no hair shirts involved, but I would like to hear your views on that suggestion. In addition, the Carbon Trust has left copies of its report on Wales's carbon dioxide and other greenhouse gas emissions figures, if anyone would like to take one with them. Are there any other points that anyone wishes to raise?

[295] **Darren Millar:** You talked about measuring our carbon footprint, but frankly mine would be much smaller if we were able to meet in north Wales once in a while.

[296] **Mick Bates:** That is an interesting point that we should consider, since this is the Sustainability Committee. I see that there are no further points, so, thank you very much for your attendance.

*Daeth y cyfarfod i ben am 12.33 p.m.
The meeting ended at 12.33 p.m.*