

# **TRANSPORT, INFRASTRUCTURE AND CLIMATE CHANGE COMMITTEE**

Tuesday 10 February 2009

Session 3

£5.00

© Parliamentary copyright. Scottish Parliamentary Corporate Body 2009.

Applications for reproduction should be made in writing to the Licensing Division,  
Her Majesty's Stationery Office, St Clements House, 2-16 Colegate, Norwich NR3 1BQ  
Fax 01603 723000, which is administering the copyright on behalf of the Scottish Parliamentary Corporate  
Body.

Produced and published in Scotland on behalf of the Scottish Parliamentary Corporate Body by RR  
Donnelley.

---

# CONTENTS

Tuesday 10 February 2009

Col.

CLIMATE CHANGE (SCOTLAND) BILL: STAGE 1 .....	1463
---	------

---

## TRANSPORT, INFRASTRUCTURE AND CLIMATE CHANGE COMMITTEE

### 6<sup>th</sup> Meeting 2009, Session 3

#### CONVENER

\*Patrick Harvie (Glasgow) (Green)

#### DEPUTY CONVENER

\*Cathy Peattie (Falkirk East) (Lab)

#### COMMITTEE MEMBERS

Rob Gibson (Highlands and Islands) (SNP)  
\*Charlie Gordon (Glasgow Cathcart) (Lab)  
Alex Johnstone (North East Scotland) (Con)  
\*Alison McInnes (North East Scotland) (LD)  
\*Des McNulty (Clydebank and Milngavie) (Lab)  
\*Shirley-Anne Somerville (Lothians) (SNP)

#### COMMITTEE SUBSTITUTES

Alasdair Allan (Western Isles) (SNP)  
Gavin Brown (Lothians) (Con)  
David Stewart (Highlands and Islands) (Lab)  
Jim Tolson (Dunfermline West) (LD)

\*attended

#### THE FOLLOWING GAVE EVIDENCE:

Robert Ashdown (Chamber of Shipping)  
Chris Austin (Association of Train Operating Companies)  
Dr Alice Bows (Sustainable Consumption Institute for Climate Change Research and Tyndall Centre, University of Manchester)  
Gordon Dewar (BAA Scotland)  
Jeff Gazzard (GreenSkies)  
Derek Halden (Derek Halden Consultancy)  
John Lauder (Sustrans)  
Marjory Rodger (Confederation of Passenger Transport UK)  
Paul Tetlaw (Transform Scotland)  
Gordon Wilmsmeier (Napier University)

#### CLERK TO THE COMMITTEE

Steve Farrell

#### SENIOR ASSISTANT CLERK

Alastair Macfie

#### ASSISTANT CLERK

Clare O'Neill

#### LOCATION

Committee Room 6



## Scottish Parliament

### Transport, Infrastructure and Climate Change Committee

*Tuesday 10 February 2009*

[THE CONVENER *opened the meeting at 14:01*]

### Climate Change (Scotland) Bill: Stage 1

**The Convener (Patrick Harvie):** Good afternoon, everybody. I welcome everyone to the Transport, Infrastructure and Climate Change Committee's sixth meeting this year. I remind members and everybody else that all mobile devices should be switched off. I record apologies from Rob Gibson, for whom we hope Alasdair Allan will attend as a substitute, and from Alex Johnstone.

We have just one agenda item, which is continuation of our stage 1 scrutiny of the Climate Change (Scotland) Bill in our fourth evidence-taking session. We will hear from three panels today. The first consists of representatives who will talk about surface transport. Following that, we will have a panel of representatives who will talk about aviation and shipping. Finally, we will hear from Transform Scotland, the GreenSkies campaign and Sustrans.

We expect to continue to hear oral evidence until March, when we will hear from the minister. We have also issued a call for written evidence, the deadline for responses to which is 27 February.

I will crack on and welcome panel 1. We have Chris Austin, the head of public affairs at the Association of Train Operating Companies; Marjory Rodger, the director of Government relations in Scotland for the Confederation of Passenger Transport UK; and Derek Halden, the director of Derek Halden Consultancy. I welcome you all. Would you like to make brief introductions?

**Chris Austin (Association of Train Operating Companies):** Would you like a few words by way of background or an opening statement?

**The Convener:** If you would like to introduce your organisation briefly, that would be fine.

**Chris Austin:** The Association of Train Operating Companies represents franchised passenger train operators throughout Britain. We are a trade association and we provide the facilities to support members through national rail inquiries and the rail settlement plan process,

which allocates revenue among companies. We also take the lead on fare and ticketing issues and on other passenger-related issues for passenger train services throughout Britain.

**Marjory Rodger (Confederation of Passenger Transport UK):** Thank you for the opportunity to come to the meeting. Members know what the CPT does, so I will skip describing that. The contributions that we feel bus transport can make and the assistance that we need can be delivered without further legislation, so we have limited our written response, to which I have nothing to add at this stage.

**Derek Halden (Derek Halden Consultancy):** The agenda says that I am here as the director of a consultancy, but a large part of the reason why I am here, rather than somebody else, is that I chair Scotland's transport think-tank, the Scottish Transport Studies Group. We have, in the past couple of years, held three debates on climate change and transport that covered a wide range of views and which have been written up. As the chair of those debates, I hope that I can give the committee an overview of the views that are out there.

We are a networking group, and as such we never respond to consultations, or take a view on them. Our members include many of the bodies that will present their own evidence here today, and that evidence will contain differing views. I will give my views as chair of STSG.

**The Convener:** Thank you for that clarification.

I will open with a general question. From a passenger transport perspective, what are your views on the proposals in the Climate Change (Scotland) Bill?

**Marjory Rodger:** The bill is welcome and CPT supports the proposals. Something has to be done and, as we have shown in our submission, transport has already started—in our premises and our fleets—to try to reduce emissions and make our contribution.

**Chris Austin:** ATOC is in the same position. Rail has a major contribution to make to tackling climate change, by reducing the impacts of carbon emissions. Rail is inherently efficient in terms of emissions per passenger kilometre.

The submission that we circulated last week points out that, in considering the bill's effects on transport, targets must be set for the transport sector as a whole. It would be perverse to set targets that would constrain the growth of rail through taking a share from car and air, thereby preventing a shift from an environmentally less friendly mode to an environmentally more friendly one.

**Derek Halden:** I have quite a few points to make, but I will just make a couple as an introduction and then perhaps come back to the others when we go into more detail.

Clearly, the Scottish Government has to do something, because international and United Kingdom Government targets have been set. The proposal of a more ambitious target for Scotland presents both risks and opportunities. Transport is a slippery sector. What if everybody started to go south of the border to fill up with fuel, so that it did not count? The way things are counted could lead to all sorts of unintended consequences.

Because transport is such a slippery sector, the main point that has come up in our discussions is the need to keep things really simple. We have to stay focused on what can be changed. We are never going to count everything, but if the view of carbon emissions in Scotland is not comprehensive, people will dodge targets. The inventiveness of businesses in finding ways of avoiding particular aspects could actually cause damage through increased emissions.

I will give a classic example of a problem that can arise with a target for transport. A company such as Tesco might decide to have fewer warehouses if its warehousing emissions, but not its transport emissions, were in the traded sector. The company might therefore end up producing more emissions, because if its warehouses were further apart, its lorries would have to drive further. The issue is very complicated. The wrong targets might, rather than trigger positive action, be a trigger on a blunderbuss that causes as much destruction as it creates benefit.

We could talk more about the details, but those are the sorts of general issues that have to be considered now, during the bill process.

**The Convener:** Has the transport sector been given sufficient opportunity, through formal consultation or through informal dialogue with the Government, to influence the development and shaping of the bill before its introduction?

**Marjory Rodger:** CPT has certainly been consulted. We responded back in September or October, and have since responded again.

As my two colleagues on the witness panel have suggested, a lot will depend on what happens when we get down to the details. The powers are broad, and further consultation will be required when we consider how the powers will be put into practice. It is good to know that it is very likely that we will be consulted again.

**Chris Austin:** I echo those views. ATOC has had the opportunity to make representations, both directly to the Government and through this committee. As Marjory suggests, the devil will be

in the detail and it will be important to continue the consultation when we reach that stage.

**Derek Halden:** Some of the wording could be tweaked—at the moment, it is a bit processy. The bill states that people must demonstrate action, rather than that they must ensure delivery, so I would like to tighten up the wording throughout. We will never be able to measure everything, so let us measure what we can change. If we can secure and deliver something, the bill should be used as a trigger for that.

**The Convener:** I have a question specifically for the CPT. You cited examples of best practice in depots and offices. How are they rolled out in the rest of the industry? How are those lessons learned?

**Marjory Rodger:** We gave the committee examples from the two biggest groups—First and Stagecoach—because between them they cover about 70 per cent of bus services. We also gave one example from Lothian Buses, although not in relation to depots. We did not provide examples for all operators, but all of them are developing best practice in their own ways. If you have been to a lot of bus garages and depots, you will know that they are big, cold and draughty places, so there is a big incentive to run them more efficiently. We have been discussing the issue—I could have cited examples from Arriva and others. All the knowledge that is gained from the money that the industry spends on research and development of vehicles and new technologies is shared.

**Cathy Peattie (Falkirk East) (Lab):** Is there scope to include in the bill engagement targets to encourage the use of public transport?

**Marjory Rodger:** That is an attractive thought, but it could be difficult to measure engagement. Modal shift and use of public transport can best be encouraged outwith the bill, provided that we get real buy-in from local authorities under the concordat with the Convention of Scottish Local Authorities. I am speaking for bus, coach and light-rail operators and there is a lot that we could do in working with single outcome agreements to improve access to health care and encourage modal shift. There is an onus on the industry to come up with information and other incentives to make public transport attractive.

**Cathy Peattie:** Are you saying that the industry does not think that the bill is necessary?

**Marjory Rodger:** Not at all—but the bill covers an awful lot more than transport.

**Chris Austin:** The same is true of rail use. There is every reason to encourage its use, and the track record over the past 10 years demonstrates that that is entirely achievable.

Throughout Great Britain, the number of rail passenger journeys has grown by about 50 per cent. It is now at the highest-ever recorded peacetime level, despite the fact that the network is a lot smaller than it used to be. Over the past 10 years, our members have demonstrated that there is an appetite for people to shift to rail, and that they have done so in large numbers. Over the same period, we have been able to reduce CO<sub>2</sub> emissions per passenger kilometre by around 25 per cent. Continued reductions of that order will be needed if the targets that the bill will set are to be met. That makes encouraging a shift to public transport very important.

**Derek Halden:** I am slightly concerned about talking about individual modes. There have been various reviews, the most high-profile of which was Sir Rod Eddington's review of transport systems, which have led to major reorganisations of the transport sector, such that we should stop thinking about modes and start thinking about end-to-end journeys. Divisions in the Scottish Government and Transport Scotland have not been reorganised in the same way as those in London departments have been. Down south there is now no such thing as a rail department; it is all about regions and localities—it is about who plans end-to-end journeys.

Once we start to talk about modal shift, we get into a complicated arena because, at the end of the day, people choose to go by bus to the shops and to drive to other places—destination and mode choice are bundled up together. We are trying to encourage sustainable places, environments and choices. Bus and rail are clearly essential elements within that, but it would be inappropriate and counterproductive for the bill to set targets for particular modes, because the unintended consequences could be far greater than any benefits.

14:15

**Cathy Peattie:** I am interested in whether you think the bill is sufficient to change people's habits. The whole idea is that to bring people on board in relation to climate change it is necessary to win hearts and minds. A good start is to encourage people to consider their transport options. Can the bill do that? Are there issues to do with winning hearts and minds?

**Marjory Rodger:** The bill is a valuable tool and it can make a valuable contribution to winning hearts and minds, but it cannot do it on its own; it is up to the operators of all modes of transport to come to the table and make the product more attractive. We must make viable and attractive choices available to everyone if we are going to win hearts and minds.

Stagecoach conducted research in Cambridge and in the South West Trains area, which are pretty affluent areas. Brian Souter had the idea that his growth in those two areas was down to, as he put it, the "green welly brigade": people were thinking with their consciences and switching to public transport, so he conducted a pretty hefty piece of research. It is interesting that it found that the top reason for switching to public transport was health—people were tired of stress and problems, so they switched to public transport. The green agenda came second. A range of influences play their parts and using them together we can make a shift.

**Derek Halden:** That finding echoes research that my firm did for the Scottish Government back in 2003, so there is nothing new about that.

The key point about winning hearts and minds is that climate change is a very high-profile agenda, but there is a lot of scepticism about whether what we do will make a difference. We must consider where the money is spent on transport and who spends it. Government currently spends about £2 billion a year while consumers and businesses spend about £20 billion a year. If we want, as a country, to change transport in Scotland, we should be more focused on the £20 billion than on the £2 billion, but we often plan how we can optimise the £2 billion that Government spends rather than the £20 billion. That relates to what was said about hearts and minds. The question is this: how do we get the purchasing decisions of the public to change? It is about enabling people to do more. The bill is much too top-down and it seems to envisage a command and control economy; I would far rather see a carbon-free or low-carbon economy develop according to Barack Obama's language of growing new jobs in the low-carbon economy. Can we do that with the current wording of the bill? It is possible, but measures would need to be implemented to back it up.

The measure that I will highlight, which has come out of our think-tank discussions, is that we need something like a Scottish carbon trading scheme. The UK Climate Change Act 2008 offers that prospect. Such a scheme could include on a common footing all modes of transport and it could, for example, let a large business that finds carbon reductions difficult invest in low-carbon buses. Marjory Rodger and her colleagues have conducted research on such issues, but where will the billions of pounds come from to invest in new cars?

Billions of pounds will probably also be required to roll out a network of electric plug sockets across the country. That will take place in the next 10 years, but it seems—as far as I can see—to have been completely missed in strategic funding decisions. People will be buying plug-in cars in

mass volumes from next year, or even this year. How will such massive expenditure programmes be funded? I cannot see the funds coming from public expenditure, but I could see them coming through a Scottish carbon trading scheme, which would enable people to invest and engage, and would enable businesses and the public to purchase from one another. That is a long answer to the question, but that is the sort of future that I would like to see. Such a scheme is perhaps not addressed specifically in the bill, but it is about what we do with the regulations under it and under the UK bill.

**Chris Austin:** Our experience in rail has focused particularly on business travel. The themes of the Climate Change (Scotland) Bill and the UK bill before it have been reflected in the approaches that businesses have taken to corporate travel plans and corporate social responsibility.

One of the reasons why Eurostar has done a lot of work in the area and has worked hard to become a carbon-neutral railway is that its customers—especially business customers—have been demanding it. Virgin Trains has a carbon calculator on its website so that the effect of a journey can be calculated, which is important to people within the corporate culture in their travel decisions. Such considerations have become important and appear to have induced a modal shift—both Virgin and National Express East Coast have gained market share from air travel over the past year. Change seems to be working through in that practical sense.

**The Convener:** Is there evidence to back up the assertion that that is what has caused modal shift—if it is happening—rather than its being caused by other aspects of what makes air travel convenient or inconvenient? For example, security changes will have had an impact on aviation.

**Chris Austin:** That is absolutely right. I cannot point to research that pins that change to environmental issues, but it appears to be one factor that is clearly marked in Eurostar's marketing campaign and in the results that it has achieved.

**The Convener:** Perhaps we will also explore that question with a future panel.

I have a subsequent question on the wider issue of engaging with individual decisions—whether we call it hearts and minds, public engagement or whatever. Does the Scottish Government need to address prices in public transport? One could say that the operators need to make a better offer, but there is also a question about by how much Government is willing to subsidise public transport to make its prices genuinely attractive. In some cases they are attractive and in others they are

not. Does the Government need to start changing the financial incentives alongside introducing legislation?

**Chris Austin:** I will start by answering for rail, which is, as you know, less contentious. It is important to recognise that more than 60 per cent of passengers are already travelling on a regulated fare and that about 80 per cent of them are travelling on some form of discounted ticket. As is the case for air fares, the range of rail fares is broad. As I mentioned, the proof of the pudding is in the success of rail having grown its market by 50 per cent over 10 years. That would not have happened if we had got the pricing hopelessly wrong. It might not be perfect, but it has certainly generated a lot of growth in business and that seems to be a major success criterion.

**The Convener:** It has not been enough to stop road traffic growing at the same time.

**Chris Austin:** Yes, but road traffic has not grown as fast. Rail growth has outstripped growth in road traffic and domestic air travel for some time now, which is good if you work for the railway. That is partly reflected in the pricing policy and the amazing degree of very low, advance-purchase fares that are available for long-distance journeys—I have been talking principally about long-distance journeys. That pricing policy has been successful and offers fares that would have been unimaginable five years ago—for example, £16.50 and, I believe, £12 on one offer for travel to London. We are talking about very cheap fares as against much more expensive business fares.

As I said, the proof of the pudding is in the eating: the successful growth of rail business over the period and the resilience of the rail industry in response to changes in economic demand. I am not saying that the economic slowdown has not had an effect on rail—of course it has—but it has not been as marked as one might have expected.

**The Convener:** Are there any other views?

**Marjory Rodger:** Yes. Eighty per cent of the bus industry is still totally commercial and in the cities the figure rises to 98 and 99 per cent. We are going through a three-year review on one of the major sources of public funding—concessionary travel. The review is reaching its conclusions, however, and I do not want to pre-empt them.

We are also working with Government on the bus service operators grant and will put in place a new environmental BSOG linked to emissions and engine quality.

I come back to what the industry is doing, which has to be funded when fares are set. The last thing we want to do is put fares up unnecessarily because every time we put fares up, we lose fare-

paying passengers. That is where I am coming from.

In relation to climate change, we are spending a lot on research and development. One example is the Stagecoach biodiesel buses that are running in Ayrshire, but at a loss. There is no public money to help us out in that. We are trying it to see how it works. We are one year in, so it is early days, despite the fact that 30 tonnes of recycled chip fat have been brought by the residents of Stewarton.

I can speak for the bus manufacturers, too, when I say that huge investment is required to get, for example, low-floor vehicles for wheelchair access to coaches. We have had major problems with balancing comfort with accessibility. The industry is funding those things with no Government help, and the costs have to be fed through.

Most of our bus fares are very good value for money. If there are problems, we need to talk about them in local partnerships and local bus forums, which are part of the bus action plan, and address them case by case.

**Derek Halden:** We need to start thinking about end-to-end journeys and people getting to places rather than about individual modes of transport. If we want to offer a tariff that is appropriate for an elderly person who is going to hospital, whether by bus or taxi, for example, the Government must ask whether it is regulating a system of fares that ensures that all the options are available. For example, is it possible to buy those fares? The bus industry is probably right to say that most of the time, the public would not buy the regulated fare, and that it can provide a more competitive fare. Individual bus and rail companies would be the same. The Government should make sure that people have the option to buy those fares. That links closely to what I said about the tradable credits that we envisage being used under climate change legislation. There are new ways of funding the bus and rail industries for the trips that are particularly efficient.

**The Convener:** Let us move on to examine some of the specifics of the bill.

**Alison McInnes (North East Scotland) (LD):** At the beginning of the session, Mr Halden said that we cannot measure everything. I have a couple of questions to explore that a bit further, and I would welcome comments from other members of the panel.

The bill uses the Intergovernmental Panel on Climate Change and the report of the UK Committee on Climate Change as a scientific benchmark. How robust are the figures on emissions from public transport in Scotland?

**Derek Halden:** Public transport figures are probably okay. I envisage that the biggest problem will be with the car fleet, which is the biggest consumer of energy. As we move through the next 10 years, a substantial proportion of cars—15 or 30 per cent; the figures are disputed—will be plug-in. Section 29(4)(a) of the bill refers to “gross electricity consumption”, which is clearly inappropriate. We want to encourage people to move towards zero carbon, which will involve their plugging in their cars at night. At the moment we waste electricity, which is why we have night storage radiators—they use largely free electricity that we could use to charge up our cars. If we want to encourage that, it seems counterintuitive to discriminate against it by counting the amount of electricity that we burn.

My overall comment is therefore that we do not want such detail in the legislation. We want the generic provisions on carbon, but it should be for the advisory body and the committee to get the detail right so that we do not end up with counterintuitive scenarios such as the one that I described.

The same point applies to buses. We could have hydrogen buses that recharge at a hydrogen store at, say, First Glasgow's Victoria depot. The hydrogen buses that are in use in London cost about £2 million each. That is expensive but, if we could afford a fleet of hydrogen buses, we could charge them up overnight from free night-storage electricity, build up a hydrogen store and run them during the day on hydrogen. The bill discriminates against that.

14:30

**Marjory Rodger:** Those vehicles will come to Glasgow, but there is another problem as well as the initial outlay. As is the case with the biodiesel vehicles, there are questions about the lifetime of the vehicles—we do not know what problems we might encounter after even just one year. Issues with biodiesel vehicles have already arisen. For example, in summer they get fungus if you do not keep the tank cool and in winter they wax. There are things to learn with any new system. For example, we had to learn to add Adblue to diesel to enable it to cope with changes in temperature.

We do not know what will happen with the vehicle's engines over time or what the situation will be with replacement parts. We will have to go through a generation of each of the experimental vehicles to understand fully what using them means and how much it costs the industry. That is why I am wary of being tied to figures at the moment.

**Chris Austin:** As my two colleagues have said, it would be useful to keep some flexibility in the

legislation to take account of technical changes. In rail, there is a move away from measuring electricity consumption through the supply points and towards train metering. That will allow a much more accurate assessment to be made within a geographical area, a company or group of services. The legislation probably needs to reflect the fact that, as the technology changes, we will be able to be much more specific about electricity consumption.

**Alison McInnes:** That is helpful.

When the United Kingdom Committee on Climate Change carried out some sectoral-based work on transport, it concluded that surface transport could reduce its emissions in the UK by between 5 million and 32 million tonnes. Can any of you shed any light on why that range is so broad?

**Derek Halden:** Julia King's review of low-carbon vehicles envisages that, by 2050, land-based transport will produce zero emissions. That seems like a sensible view, which means that the increase in emissions from transport that we are looking at will arise largely from aviation.

I would like to think that, because of the more ambitious targets in Scotland and the fact that we are working to a shorter timescale, we can reach the point at which land transport produces zero emissions faster than elsewhere. However, that can take place only in the context of the electric future that we are talking about, which involves renewable or zero-carbon energy and people charging up cars and buses. That is what we are working towards, and we need to ensure that the bill sets challenging targets year on year so that it can happen.

There are major instabilities in the area that we are discussing. For whatever reason, the international carbon trading schemes now seem to include aviation and international shipping. For years, the UK Government took what I think is the right view, which is that either all forms of transport should be included or no forms of transport should be included. The French argued that aviation should be included. They saw it as a way of getting a competitive advantage because the UK is an island and—this is particularly true of Scotland—dependent on aviation. After all of the usual European negotiations, aviation has ended up being included. That is significant, because there is an instability in transport markets that could cause all sorts of catastrophes. We could end up inadvertently encouraging one mode of transport instead of another: the system could end up being good for aviation or bad for aviation. No one has any idea what could happen.

There is a lack of consistency in the treatment of international tradeable credits. I hope that we can

remove that instability and use policy regulation to ensure that the credits that the Scottish Government buys through the international trading schemes score fairly for all modes against its climate change targets. It is a difficult issue that probably needs more consideration than we can give to it now. Members of the group that I represent or other firms could look at it—there is a real analytical task to be done.

**Marjory Rodger:** I offer a slight caveat. Much of the research was done in a healthier economic climate. I worry about the impact that the depth and length of the recession will have on the cost of the changes.

**Chris Austin:** To some extent, the variation will depend on how many miles are run by electric traction and how many are run by diesel, as electric traction is more efficient in terms of carbon usage. However, everything depends on generating policy—the proportion of electricity that comes from renewables and the proportion that comes from fossil fuels. Rail can offer carbon-neutral travel, as Eurostar does, but that depends on the source of the electricity.

**Alison McInnes:** I would like to ask a general question before handing back to the convener. Do you have a view on the 2050 and interim targets?

**Derek Halden:** I contributed to the Scottish Council for Development and Industry response, which said that we can achieve the targets, even with renewables, but that we had better get our skates on if we want to do so. We could have moved faster in the past few years.

**Alison McInnes:** If we need to be encouraged to get a move on, do you think that the interim target is set at the wrong date?

**Derek Halden:** I do not have a view on that.

**Chris Austin:** In our view, the dates are far enough away to enable us to make the significant changes that are needed. I come back to my original point: targets need to be set for the transport sector or more broadly. If they are set for rail, growth and transfer from less friendly modes to rail will be inhibited.

**The Convener:** I assume that there is broad comfort with the long-term target; that gives us some confidence that you regard the target as achievable, rather than just necessary.

The policy memorandum to the bill suggests that, prior to 2020, annual emission targets will be lower than 3 per cent—perhaps 1 per cent—and that we will build towards targets of 3 per cent a year after 2020. Can the transport sector achieve cuts of that order? Are cuts of a more ambitious nature achievable? When the intention to publish the bill was announced, it was intended that there should be annual cuts of 3 per cent.

**Derek Halden:** There is a lot of freight and air transport, but 85 per cent of personal travel is by car or on foot—and one of those modes is effectively zero carbon.

We work with retail developers. Why are they the only people to have installed public electric charging points for cars—at Silverburn and at the St Enoch centre in Glasgow? Is everyone else asleep? The Norwegian Think car is now on the market; Golf and Focus plug-ins will be on the market within six to 12 months. Every car manufacturer is working on the issue, but where are the charging sockets? It will take a decade to install the infrastructure. Why are we asleep?

If we take out the 85 per cent of trips that are made on foot or by car, of course ambitious short-term targets are achievable. It really depends on whether consumers will find it attractive to buy the new products. The Germans are trying to keep their car industry moving by giving people €2,000 if they replace an old, inefficient car with a new one. Perhaps Government should use such levers to kick-start movement in that sector, so that we can meet the ambitious targets that have been set.

**The Convener:** Should Government be willing to consider not just technology change but demand management? We have said little about the role that demand management could play in reducing emissions.

**Derek Halden:** Demand management is something that we do all the time—for example, by choosing not to have a road between one place and another. It is in our decisions about the infrastructure that we build; it is inherent in everything that we do. In my view, we need to determine our management criteria.

Demand management is important. In most places, profits in the shops go up when we pedestrianise town centres. It is obviously important to manage demand in town centres so that people find shopping there more attractive. We should look at the criteria and what we are trying to achieve. Talking about demand management in the round—as a means of reducing car travel—does no more than pay lip service to Government policy. Government depends on revenue from car taxation to afford everything that it does, and councils depend on car parking revenue to fund a huge proportion of local services. We depend on the car to fund our current lifestyle, so changing the taxation system would have major implications.

**The Convener:** I invite the other witnesses to comment on whether the annual target should be 3 per cent up to 2020 or less than that.

**Marjory Rodger:** According to current figures, buses are responsible for about 3 per cent of emissions, and I am confident that the 3 per cent

target can be achieved in the short term. Under disability discrimination legislation, all single-decker buses must have low-floor access by 2015; for double-deckers and coaches, the target dates are 2017 and 2020 respectively. That means that buses will have to be replaced. When they are, we will move from having vehicles with Euro 1 engines to having vehicles with engines that comply with the Euro 3 or Euro 6 engine emission standard, which are a lot cleaner.

That is the interim phase. We cannot switch over to hybrids and biodiesel-fuelled vehicles overnight as we must see how they work in the longer term. After that, the manufacturers must jig up—it is not a quick fix. However, clean diesel engines will be introduced in the short term. They are coming in now, and that process will accelerate.

**Chris Austin:** I would not like the timescale to be any tighter, partly because of the point that Marjory Rodger just made. That is accentuated in the rail industry, given the long lead time for investment in new technology.

**The Convener:** Taking account of the point that you made earlier, I make it clear that we are talking not about a specific target of 3 per cent for rail but about a target for transport. Do you believe that the transport sector as a whole can achieve annual reductions of 1 per cent up to 2020? Could it achieve reductions of closer to 3 per cent?

**Chris Austin:** I do not think that it can do better than that because of the lead time for replacing vehicles and equipment, whether bus or rail, and for the changeover to electric cars that Derek Halden described.

**Des McNulty (Clydebank and Milngavie) (Lab):** Patrick Harvie's question was about improving efficiency in the transport sector. I will put the reverse question. Should we ensure that new housing and retail developments are transport accessible—in other words, that there is a rail or bus connection within walking distance? One of the big problems that we face is that a great deal of development is permitted in places where people's access to services—places of work, schools and hospitals—is entirely dependent on cars. Do you have a view on that aspect of the issue, as well as on the reductions that you can deliver through your operations? If we organised ourselves in a different way, we could make much greater use of public transport and avoid putting people in a position where their only option is to use the car.

14:45

**Marjory Rodger:** My strong view is that I would love to see that happen. Planning is essential, and it is a huge mistake that transport has, historically, been involved far too late in planning decisions.

That still happens. The tools are available and the research and development has been done—any postcode can be put into the Traveline Scotland database. For example, if the national health service looked at three sites for relocation and decided that, as everything else was equal, it should consider the transport connections, some different decisions might have been made. I agree with any proposal that leads to transport being included in planning decisions, because you do not change habits retrospectively. The industry would offer incentives for all modes of transport—we would give free travel and lay on services—if we could get in at the start of the process. I would welcome that.

**Chris Austin:** That has to be right, but it has taken a long time to reach those conclusions. There has been a lot of retrospective action in respect of rail, in that new stations have been built to serve new developments. That has helped, but I agree that that is not a substitute for planning it all from the outset.

**Derek Halden:** I come back to the point that I made at the outset. It is about door-to-door journeys. We have had Sir Rod Eddington's review and Cabinet Office reviews that have come to conclusions about making the connections, joining things up and planning access rather than transport modes. All those conclusions are clear, but it worries me that we still invest the money separately by mode. Although we might talk the talk about planning access and connections, we do not walk the walk, because we still fund rail, bus and road through separate delivery mechanisms. Until we change our approach and put the money behind improving access and connections, we will not achieve those aims.

**The Convener:** I have one more question on targets. Beyond the targets in the bill, will other European, UK or Scottish targets that the transport sector is having to meet impact on transport's ability to make greenhouse gas emission cuts? The European targets on renewables or reducing energy use might be examples. Are there others that impact on transport's ability to make the transformational change on climate change that we seek?

**Chris Austin:** I am aware of one such target, which is the restriction on the sulphur content of diesel. The sulphur emissions target means that our freight colleagues in particular have to burn more diesel to achieve the same mileage, because the chemical composition of the clean fuel is different. That demonstrates that, unless you are very careful, you can set conflicting targets and solve one problem but create another. That is a practical example that stems from European Union rules.

**Marjory Rodger:** Another practical example is that the cleaner our engines get, the heavier they get and the more fuel they burn. We are therefore producing fewer emissions but using more fuel.

**The Convener:** In order to try to be cleaner.

**Marjory Rodger:** Yes. We are getting there, and that trend is being slightly reversed, but that has definitely been the case.

**Derek Halden:** The problem is so serious that unless the bus industry gets its loadings up or rationalises its service, it could become worse than the car in respect of emissions per passenger kilometre. I would be the last person to want to knock buses: we must increase the bus loadings dramatically so that we get the benefits. However, that has been the impact of the change that Marjory Rodger described.

My conclusion is that we must unlock the power of consumer expenditure. Consider what is spent on bikes, cars and the purchase of tickets. That is where the big money is out there. To come back to my first point, the changes that will be made by, for example, Tesco in warehousing and distribution, in the way that it packages products and sells them, and how much is charged for car parking and so on will be the drivers of change.

Whether the targets are right or wrong seems such a detailed academic question. I know that I am at the committee representing a study group, but I would turn round and ask, "Why, academically, does it matter?" It does not matter. The important thing from a research perspective is that we know that setting targets acts as a trigger for action. The problem is that the mechanisms for action—the delivery mechanisms—are not there yet. We might pull the trigger and then find that we go bursting off in all different directions because we do not have a barrel that will send the bullet towards the outcomes that we want.

I mentioned a figure of 85 per cent for car and walking. I should have clarified that I was talking about shopping trips. Of course, public transport achieves a much higher modal share on work trips. Workplaces tend to be more usefully situated than shops—a lot of the really poor interaction between land use and transport has involved shopping centres and out-of-town developments.

I wanted to get the facts clear, because someone is writing all this down.

**The Convener:** They are giving it a go, certainly.

**Shirley-Anne Somerville (Lothians) (SNP):** The strategic transport projects review suggests a saving of 100,000 tonnes to 150,000 tonnes of CO<sub>2</sub> equivalent if all the projects in the review are delivered, relative to business as usual. Do you think that that is an equitable contribution for the

transport sector to make in pursuit of the 80 per cent emission cuts?

**Derek Halden:** The strategic transport projects review has had a difficult job to do because the strategy is not clear and you cannot do a strategic review unless there is a strategy. I cannot therefore make a lot of sense of any of that. I do not think that any of its conclusions look crazy; they all look perfectly sensible. You can get to the right answer in lots of different ways. I would not want to be critical of the review, but I think that we need a strategy that does more than the national transport strategy, which says, more or less, "We need to reduce emissions somehow."

We need to sort these things out and decide what we are going to do—our options include the things that I have been talking about, such as powering cars from electric plug sockets or using some sort of future biofuels for aviation. Once we have that strategy, we will inevitably have different figures from those that the strategic transport projects review used.

The detail of the specific schemes will be interesting in that regard. Some schemes will increase carbon dioxide emissions and some will reduce them. Therefore, we should focus on delivering quickly those that reduce carbon emissions and perhaps think about what can be done to those that increase carbon emissions to make that less of a problem. The aggregate figure is much less interesting than the detail.

**Marjory Rodger:** The strategic transport projects review document is a massive read, but to me it is simply 29 projects. Until they are prioritised, have funding streams attached and we have some idea of how they will move ahead, I will find it hard to comment on the figures.

**Chris Austin:** I am not an expert on this but, to the extent that the review includes projects that will increase capacity for public transport, which will encourage modal shift, it must be good. Allowing the shift to rail to take place is key to the issue that we are discussing. That shift is constrained at the moment by the existence of a number of pinch points around the network. Enabling communities that are no longer rail connected to access the network is also important, which is what some of the new rail projects will do.

**Marjory Rodger:** One quick fix would be integrated ticketing, which would not cost much to introduce. Anything that makes public transport simpler for people to use, such as better information, would make a valuable contribution.

**Shirley-Anne Somerville:** Given the challenging targets that are proposed in the bill, do you think that there needs to be a change in the emphasis on emissions reduction in the Scottish Government's transport policy? Is so, what should that change be?

**Marjory Rodger:** I will be parochial and talk about buses. We are already working with the Scottish Government on ways of ensuring that the BSOG grant conditions include an environmental target. What we are talking about would be pretty challenging for the industry to meet.

**Chris Austin:** The same may be true of rail. There are a lot of initiatives that the operators are taking and which they have been able to justify commercially, either because the initiatives reduce energy consumption and cost or because they attract more passengers. That said, we do get to the point at which, if we are to take things further, further investment is needed. That is the point at which Government needs to come in.

**Derek Halden:** I will bang on at the point that we have transport because we are trying to do economic and social activity; that is why it is there. It is not sensible to try to set targets for transport that are independent of those wider activities. We cannot carve off transport and say, "This is why it is different." One of the biggest emitters is the entire machinery of freight transport in Scotland. What to do about that is a difficult optimisation decision. Do we build more warehouses and hold stuff for longer or have fewer warehouses and run more trucks around the country? The choice is between warehouses and trucks, and only one of those is a transport decision. The idea that we can set emissions targets for only the transport sector is wrong. People will just shift sectors and we might achieve efficiency gains, or we might not. It is not sensible to try to set targets only for the transport sector.

**Des McNulty:** It may not be your central interest, but what are your views on the inclusion in the bill of emissions targets for aviation and shipping?

**Marjory Rodger:** No sector can be excluded. I am not qualified to say whether the targets are appropriate, but everything must be included.

**Chris Austin:** That is right, particularly given the environmental performance of aviation. If we are to make significant change, modal shift will be involved—at least on domestic journeys. If we do not include or measure aviation, it will be difficult to achieve such change.

**Derek Halden:** It is simply a question of following the issue from the European Community, to the UK and then to Scotland. The fact is that international aviation and shipping will be traded, while other modes will not. We have inherited a situation about which we can do nothing. We need to try to deliver differently for international aviation and shipping, so they must be in the bill and they have to be dealt with separately. Trying to redress the unfortunate imbalance that the EC has created

by trading only some sectors is a major issue for this committee and the Scottish Government.

**Des McNulty:** I will concretise things: my next question is on surface transport links to airports. Should surface transport links be improved in order to deliver maximum emissions savings? At the outset, Derek Halden made the point that this is all about end-to-end journey planning. Should aviation emissions be considered in the wider context of airport access links?

**Derek Halden:** Yes.

**Des McNulty:** Do you want to expand on that a bit?

**Derek Halden:** Well—

**Des McNulty:** The committee is about to publish the results of its inquiry into the potential benefits of high-speed rail services, as part of which we have considered high-speed rail as an alternative to aviation, particularly for journeys within the UK. Should we think about aircraft emissions in the context of planning journeys to airports? Should aircraft emissions be included in the equation for rail and air and consumer alternatives?

15:00

**Derek Halden:** Yes, but I do not know what decisions consumers would make. One huge area—everyone has highlighted it—is the market's failure to get out information on the issue. We need think only of the Government's decision to put a health warning on cigarette packs, in which it said, "This could seriously damage your health." It did that for reasons of health and social care.

There is no reason why, when people can receive journey plans on their mobiles or PDAs, information on carbon cannot be included. Many websites already contain carbon calculators, and such information could be standardised across all systems. The Government would have to pay for that, because there would be no commercial benefit for airline or rail companies—even though Virgin already provides such information. In order to achieve the social and environmental benefits, it would be up to the Government to ensure that the information was available to consumers. Would consumers then choose high-speed rail or would they choose air? We do not know. However, big money will come from such markets, and we will have to develop them and provide people with information. The future of transport will be completely unstable as long as consumers—or, as you would regard them, voters—do not understand transport. We cannot make any progress until we tackle the information agenda.

**Marjory Rodger:** Can I come back on this point? I definitely did not talk about market failure in information. I said that we had to keep

improving and enhancing the information. At the minute, for example, we are talking about getting comprehensive journey planning and individual travel plans from Traveline Scotland to people's mobiles via SMS texting.

While we are still talking about surface transport to airports, I will say that we have some excellent bus partnerships. Shuttle buses can provide a door-to-door service, and that service is very good in Edinburgh. There are good partnerships in Glasgow too.

If there are gaps in services, we can enhance those services easily, cheaply and flexibly.

**Derek Halden:** I am sorry, I did not want to imply otherwise—I do not disagree with anything that Marjory said there. I agree entirely. The Government's stake in Traveline has been to fund components with social and environmental benefits, whereas it has been the bus industry that has financed information on journey planning.

**Chris Austin:** A lot of action has been taken on providing information on the National Rail website, which provides local onward travel information, links to Traveline, and local maps showing where buses stop. That provision of information has been revolutionised over the past 12 to 18 months. A lot more local information is provided in order to enable people to plan their door-to-door journey.

There is still more to be done. The provision of train information via SMS texting, which Marjory mentioned, has revolutionised people's travel experiences. People are no longer left wondering where the train is; they can see from their mobile phone what has happened to it.

Airports are such big travel generators that the management of surface travel to airports is really important. Across the piece, people have been turning to higher-volume public transport modes such as bus, tram or rail, all of which have a part to play. The number of trips generated will depend on the size of the airport. Transport systems that use low-carbon vehicles—or, in the case of electric trains, vehicles that emit no carbon at the point of use—have advantages.

ATOC has been working on station as well as airport travel and access plans. Stations are major travel generators too. Most of the large stations in the country carry far more passengers daily than the airports. They employ large numbers of workers too, in train crew and station staff. It will therefore be quite important to make travel information available so that people can make informed choices on how they can reach the station without automatically jumping in the car. That will work on a commercial level too, because congestion and restricted parking around stations may mean that people will not choose rail for their main journey. If people realise that they can reach

the station by bus or on foot, it will influence their travel choice.

**Marjory Rodger:** I would like interchanges to be improved. We must spend money on making interchanges much easier and on providing better facilities. My quick fix win to pay for that would be to treble car parking charges.

**Des McNulty:** BAA is coming in behind you, so to speak—we have a BAA witness on the next panel. I will put the same question to him. The airport car parks at Glasgow and Edinburgh airports seem to get ever bigger, while the airport buses seem to run empty. Is that visual impression wrong? In terms of surface transport links to airports, is bus patronage increasing relative to car usage? It seems to me that more people are using the car to get to the airport. For example, Edinburgh airport has not only the official BAA car parks but an outer ring of private car parking provision.

**Derek Halden:** We do quite a bit of work with property developers. Parking is a very nice revenue earner: the developer of a typical shopping centre is making a lot of money from car parking. We have been trying hard to get shopping centre developers and operators to do partnerships with the bus industry so that public transport operators can share in the increased profits that attracting new business in that way can bring. We cannot drive up modal shift from car to bus unless the people at the destinations work with the public transport providers in business partnerships. At the moment, most trip attractors—including airports and shopping centres—are making money only from car travel. They are businesses, so of course that is what they will do. We will see no change until we find a way to unlock the potential of partnerships between public transport operators and trip attractors. Success in that regard is key to all this. If we do not get modal shift, we will see further increases in car parking at most of the key trip attractors.

**Marjory Rodger:** Bus partnerships with airports make money. They must be carrying passengers. The Edinburgh shuttle, which was launched as an experiment, broke even and then went on to make money much more quickly than people anticipated. Park and rides are exceedingly important in this regard. They work.

**The Convener:** Perhaps we can explore in writing the question whether we have any statistical information on what proportion of journeys are made by car and what by public transport. That would be helpful to know.

I turn to the advisory body that may be established under the bill. The UK Committee on Climate Change will take on that role, at least in the first instance. There is the option to set up a

Scottish advisory body to carry out the same functions. Will the UK Committee on Climate Change understand the Scottish context well enough to carry out its functions in relation to the Scottish act, as it will be, the Scottish Government and the Scottish economy, or is it more appropriate to have a stand-alone Scottish body?

**Marjory Rodger:** Could a secondment not be made? Perhaps two people from Scotland could be seconded to the UK committee?

**The Convener:** I believe that the UK committee is looking at how it will take on the function.

**Marjory Rodger:** I do not have a strong view on the matter.

**Chris Austin:** As we said earlier, in the main, the devil will be in the detail. The Scottish national perspective needs to be heard. From Scotland's rail network's point of view, the detail is important. I do not have a view on how this is done—whether by way of secondment or separate committee—but the information flow needs to be there.

**Marjory Rodger:** I agree.

**Derek Halden:** This is about hearts and minds. The public needs to have an identifiable figure that they can relate to; a visible champion. I am not sure whether that could be done from London, particularly given the more ambitious targets that are being set in Scotland and the huge potential of our renewables capacity. I have looked at the two options. My view is that what is proposed may all be too top heavy. That is part of my top-down concern in terms of delivery. It does not really matter which option is taken, but we need a presence in Scotland; an identifiable person who will champion the agenda on behalf of Government. Without a key champion figure, the public will have no one to relate to. People may end up believing that nothing will happen.

**The Convener:** We are not going to say the tsar word, are we?

**Derek Halden:** If someone is called a tsar, it is a symptom of top-down failure. The tsar-type way of doing business does not work because it is so top down. The top down and the bottom up have to meet. Tsars do not work for the simple reason that they are called tsars.

**The Convener:** Has the transport sector engaged with the UK Committee on Climate Change to date? Does another forum exist for that sector to feed in views on the climate change agenda?

**Marjory Rodger:** I know that my London colleagues have fed in CPT views. Briefing papers have been submitted. That is all that I can say about that.

**Chris Austin:** We have fed in views, too. There is also quite a dialogue through the Department for Transport, which we would regard as our sponsoring department.

**The Convener:** But not with the UK Committee on Climate Change.

**Chris Austin:** We have been involved in input to it.

**Derek Halden:** I am, like many others, a consultant who works on projects. Most of the information is out there in reports that my colleagues and I have done. We have produced the evidence. I hope that those we have done those projects for—whether lobby groups such as the CPT or public authorities—submit that evidence. We would not get involved in that. I am happy to talk as the director of a consultancy, albeit one that works mainly for English clients.

**Cathy Peattie:** The CPT does not believe that sectoral targets would be workable, but is there a case for developing a mechanism for reporting on the emissions from the surface transport sector?

**Marjory Rodger:** If we go ahead with the scheme to replace the BSOG, we would report on a yearly basis. There would be figures. I should also say that there is a lot of driver training to make drivers more aware of the issue of fuel efficiency and to erase bad habits. We are trying things from that aspect too.

**Cathy Peattie:** I want to move on to the bill's proposal to allow for duties to be placed on public bodies. What duties could be placed on public bodies to drive towards a lower carbon transport system?

**Derek Halden:** I would go for big hits again. Even now, planning permission should not be given for new housing developments without our having clearly thought through what to do. We may need slightly off-street mini-multistorey car parks, for example, to free up streets for other uses, such as for people walking about. There could be common charging points. We need a different way of thinking.

The duties that are placed on public bodies will be related to a range of changes. The climate change agenda is big, and many changes in practice are needed. Duties will need to be placed on those bodies, but the bill should not prescribe them. We are talking about levels of detail. If we lock such things in, we will end up in a mess. The bill should be kept really simple. The aim is to reduce carbon emissions and create an enabling framework for lots of good things to happen.

**Marjory Rodger:** I echo that.

**Cathy Peattie:** Would local authorities benefit from having to report annually? Derek Halden

talks about not being prescriptive. If we are not prescriptive, how can we measure local authorities' achievements? How can we give them something to work towards, now and in the future?

**Derek Halden:** Earlier, I referred to international carbon trading schemes. The same sort of mechanism could be used. Why cannot there be carbon equivalent reductions? Projects could be rewarded. People could say, "Okay, if you go and do this good project, that'll be equivalent to a carbon emission reduction of X." However, it would not currently be viable to trade that CER in an international market—it is much cheaper to buy credits in India, which I have real concerns about. The right to buy cheap credits overseas should be balanced by responsibilities to buy credits at home. That is the sort of practice that I would like the Scottish Government to develop. We should say that we will put our own house in order, as well as trade in international markets. We should consider that type of certification mechanism, how to audit it and whom we should get to do the certification. Primary legislation is not needed to deal with such details; the UK Climate Change Act 2008 empowers the Scottish Parliament to pass regulations to deliver such things.

**Cathy Peattie:** But the UK act does not place a duty on public bodies to deliver.

**Derek Halden:** No, it does not—sorry.

**Marjory Rodger:** Requiring public bodies to deal with the energy efficiency performance of public buildings would be a good start in getting the mindset focused on delivery. If they can get good practice examples and roll them out, that would be a good start.

15:15

**The Convener:** I want to follow that up, as I am a little unsure about the general tone that is coming from the witnesses. Derek Halden argues for keeping the bill simple and not putting in too much detail. However, given some of the issues that have arisen during our discussion, such as the provision of electric charging points, the adoption of electric or highly efficient vehicles and modal shift from air to rail and eliminating the use of air within reach of the rail network, surely the bill offers an opportunity to make the public sector crack on with some of those changes rather more rapidly than would happen without specified public duties. If the public sector cracked on more rapidly, surely that would give confidence to industry to start producing and selling electric vehicles and marketing the products to use the electric charging points.

**Derek Halden:** I can trade with a bus or car company and, in effect, burn oil. I can trade with many companies that offer ways to travel round in

mechanised transport, but I cannot trade with anybody if I walk to Princes Street from here, so therefore nobody is making any money and there is no mechanism to deliver. However, if we set up a framework around footfall and driving up the number of walking trips that replace car trips, local authorities can deliver a carbon reduction and that will create a financial funding framework within which those sorts of things can happen. That is the type of progressive trading that I am arguing for. If we want to deliver, we need such tools because, otherwise, all the reductions will have to be delivered with a top-down approach, for example, by trying to have more and more renewable energy and making transport as clean as possible. It is probably a lot easier just to have people walking from A to B a bit more.

**Marjory Rodger:** My keep-it-simple suggestion is that a transport plan should be in place before planning permission is given for any development of a reasonable size, residential or commercial.

**Chris Austin:** I certainly agree with Marjory Rodger's point. The only other point that occurs to me is that we need to reflect the approach in the various objectives that are set for transport operators on regulated activities. I was going to say that climate change is relatively new, but I do not mean that—people have been thinking about climate change for some years. I mean that the implementation of measures to tackle climate change is relatively new and is not yet embedded in everybody's thinking, and certainly not in objective setting. That might be considered. However, as Derek Halden said, that does not have to be specified in the bill; it can be dealt with downstream in the light of advice from advisory committees and through delegated powers.

**The Convener:** Finally, we have a question from Alison McInnes.

**Alison McInnes:** My question was covered in the earlier discussion about hearts and minds, so I am happy to leave it there.

**The Convener:** Okay.

Are there any outstanding issues that the witnesses intended to raise with the committee but which have not come up in questions?

**Marjory Rodger:** No.

**Chris Austin:** No.

**The Convener:** In that case, I thank you for giving up your time to answer our questions. I suspend the meeting briefly to allow for the changeover of witnesses.

15:18

*Meeting suspended.*

15:20

*On resuming—*

**The Convener:** I welcome the second panel of witnesses. Gordon Dewar is the managing director of Edinburgh airport and represents BAA Scotland; Robert Ashdown is head of the technical division at the Chamber of Shipping; Gordon Wilmsmeier—I hope that I pronounced his name correctly—is senior research fellow at Napier University's transport research institute; and Dr Alice Bows is a researcher at the Tyndall centre for climate change research in Manchester.

I will start with a general question about aviation and shipping. Why are they often singled out in the climate change agenda and in relation to the proposed legislation?

**Robert Ashdown (Chamber of Shipping):** It is important that we decouple aviation and shipping. There is no reason why the two industries should be treated as one, and both can be dealt with on their own merits. Historically, they have been lumped together primarily because they are both international industries—they straddle national borders—that are outwith the current Kyoto climate change protocol and do not pay tax on bunker fuels. To my mind, those are the key elements that link aviation and shipping.

**Gordon Dewar (BAA Scotland):** I do not disagree with that. Aviation and shipping present different issues and face different challenges. It is fair to say that BAA wants aviation to be included in carbon trading but, because of the issues with international boundaries, which were well recognised in the consultation on the proposals for the bill, the best place for it to be dealt with is within the EU emission trading scheme.

**Dr Alice Bows (Sustainable Consumption Institute for Climate Change Research and Tyndall Centre, University of Manchester):** I agree with what Robert Ashdown said about separating the two industries. They are quite different. One reason why the Tyndall centre started examining aviation and then shipping was that they were two of the sectors with the fastest-growing carbon emissions.

**Gordon Wilmsmeier (Napier University):** I also agree with what Robert Ashdown said, but it is important to acknowledge that shipping is one of the most international industries in the world—perhaps even more international than aviation in its workings—and is hard to control. The main controlling body for anything that happens in international shipping is the International Maritime Organization. It is an important body to support because, although many countries have not signed certain agreements, they still flag ships. There is a global issue.

The other important matter is domestic shipping—not only coastal shipping within the UK, but ferry services in Scotland. Those services are not covered by the bill, which is an important point. They are also part of public transport but were not mentioned when public transport was discussed earlier.

**The Convener:** The bill gives the Scottish ministers the power to include aviation and shipping—I will try to put a pause between them—in the Scottish targets and they have indicated their intention to include both sectors fully in the targets from the very first batch. What is your view on that decision? Do you accept that it gives Scotland the opportunity to lead, rather than follow, the debate on how the targets on greenhouse gas emissions will be pursued?

**Gordon Dewar:** We certainly understand and welcome the leadership and commitment that the Scottish Government has shown in pursuing this critical agenda. Our concerns are more about the practical aspects and the risk of unintended consequences from dealing with the issue at the national level, so we are waiting to see what will come out in the detail. I think that an earlier panel of witnesses expressed similar concerns.

We support the ambition to ensure that we do the best that we can, but we believe that, to make a difference, the European emission trading scheme will be the right forum because the European level is the minimum level at which aviation operates. The unintended consequences that we are concerned about would make Scotland uncompetitive. Any measures that try to limit aviation or, indeed, to impose costs on aviation are likely only to move emissions from Scotland to somewhere else rather than reduce them overall. Therefore, such measures would be ineffective and would place Scotland, which is already a peripheral nation on the north-west fringe of Europe, at a distinct disadvantage.

**Gordon Wilmsmeier:** The ambition to include shipping is good, but I would extend it to include not only international shipping but domestic shipping and ferry services.

On the competitiveness issue, maritime transport in Scotland, which is basically an island country, is underdeveloped in comparison with maritime transport in nations with a similar gross domestic product or population. The strategy of moving towards modal shift might lead to greater use of shipping. The important question is how you ensure that measures do not impact negatively on shipping developments; otherwise, shipping might become uncompetitive in comparison with other transport modes. In that respect, it is important to consider level playing fields for transport modes. How do you get the infrastructure charges right? How can you promote

shipping to make it competitive in comparison with other modes? In particular, how do you switch from moving freight by road transport to moving it by shipping? Doing that would perhaps bring efficiency gains.

**Robert Ashdown:** It is not a question of desirability but of practicality. It would of course be good if the Climate Change (Scotland) Bill was entirely holistic and dealt with every aspect of every sector. The problem is how that could be done. How can Scottish shipping be defined, and how can Scotland's contribution to global international shipping emissions be taken into account? Let us be clear that we are talking about international shipping, not domestic shipping, at this stage. I make it clear, too, that the Chamber of Shipping advocates bringing shipping into a global carbon emissions reduction scheme and that we have gone out for an emission trading scheme.

We stress the global element because shipping is an international industry, and the policy levers that are available to nation states, let alone devolved nations or regional bodies such as the European Union, are so weak that it is almost impossible to enforce the delivery of desired actions. Therefore, we end up with unintended consequences that might result in modal shift, which would increase carbon emissions. If Scotland included international shipping in the emissions calculation and put a target and cost on that, what would a commercial ship operator do? He could call at a Scottish port and pay a fee, or he could call at an English port, pay no fee and let another body drive the goods up across the border. We must be careful to separate out our laudable ambitions from the practical effects of the actions involved.

**Dr Bows:** From a practical point of view, if the bill aims to avoid so-called dangerous climate change—whatever that means—the science behind that means that all sectors must be included because the climate obviously does not identify which sectors you do or do not chose to include. Obviously, taking action involves practical issues and can have unintended consequences, but we must also consider the consequences of climate change. A recent paper that Kevin Anderson and I had published at the Royal Society illustrated that we have very few years left in which to start to reduce emissions globally in real terms, because we are heading for a 4° temperature increase by 2100, which is significant climate change. In the absence of a global cap, which we do not have and which is not likely to be agreed by the end of the year, any mitigation action that we take in the meantime will be positive in the context of climate change because the quicker we reduce emissions, the less challenging the situation will be in the future.

The issue concerns cumulative emissions—we cannot focus only on the 2050 target, because it matters what we do in the early years. The less that we do in the early years, the more stringent that target will have to be in the future.

15:30

**The Convener:** It has been suggested that one way in which we can account for emissions that are associated with international industries is to examine consumption rather than production—to measure and report on the emissions that are associated with the production of goods or services that are consumed domestically. Would you support that? Is it a reasonable way forward?

**Dr Bows:** In each sector, there is a combination of producer-based and consumer-based approaches. Some sectors could argue that, essentially, double counting is taking place. The electricity power sector, for example, is in the emission trading scheme, and consumers are also being pushed to improve their energy efficiency by turning their lights off and their televisions off standby. Because the challenge is so great, I advocate the use of both consumer methods and producer methods where they are most appropriate.

We are currently working on a method for aviation, which will involve the allocation of regional aviation emissions on the basis of a producer-and-consumer approach. It is difficult to use one or the other and come up with something that is relatively equitable, or as equitable as we can get.

**The Convener:** Is it possible to take that approach in relation to shipping, given the complexities?

**Dr Bows:** I would like to do more work on shipping. It is a more complicated issue: the travel that is involved is less of an A-to-B route, and more actors are involved. We are trying to carry out more research on that at the moment.

**The Convener:** Are there any other views on the options for the producer and the consumer?

**Robert Ashdown:** It is not quite clear from the terminology that you use how you define the producer and the consumer. Perhaps you could explain that further.

**The Convener:** One aspect involves having a duty to measure and report on emissions that are created elsewhere but associated with imported goods.

**Robert Ashdown:** There are numerous ways of measuring emissions from ships. Looking at imported goods is one way to do that, although it, like all the other ways, has its problems. To be

clear, the comments that I made in the COS submission about the difficulties that the shipping sector faces in relation to national legislation for what is an international industry relate solely to actual reduction targets rather than to measurement, because measurement provides no incentive to try to avoid, in a legitimate way, additional costs or charges.

**Cathy Peattie:** I will begin with some questions on the aviation sector. Does Gordon Dewar agree that early action is required to reduce greenhouse gas emissions in order to avoid dangerous climate change?

**Gordon Dewar:** I am not an expert on the science, as you can imagine, but there is certainly enough evidence, which is growing and becoming more compelling, that we need to take action. The only debate that we need to have is on the appropriate action to take. The aviation industry is viewed by many as a significant problem—it is viewed as a greater problem than is suggested by the reality of the situation, given that it currently accounts for only 1.6 per cent of global emissions.

However, it is true to say that the sector is growing quickly, and therefore we cannot sit back and take the situation lightly—we have to act. Many developments are already occurring in aviation, such as new technologies and improvements in engine efficiency. We have also made efforts in relation to our own building emissions at an airport level, and consideration has been given to surface access, which we heard a lot about from the earlier panel.

Our track record on putting the matter at the core of what we do is important, but, fundamentally, that does not entirely address the fact that the sector is growing and that the technology of using kerosene in jet engines is an issue going forward. That is why we think—and the Stern report makes it clear—that the right answer is to consider emissions trading as the way forward. A trading scheme would balance the economic benefits and the wider benefits of aviation and many other transport modes, including shipping, with the ease of addressing the issue.

Global emissions are important, no matter where they are produced, and that is why trading—at least at a minimum European level, if not at a world level in the future—is the right place to start. It preserves the model of advocacy and leadership, which the developed world needs to take firmly on its own shoulders, but it is not so fundamentally damaging to our own economy that we undo the good. I am constantly reminded that people will only follow good leadership—they will not follow stupid leadership.

**Dr Bows:** Globally, aviation emissions are quite small, but, globally, most people do not fly. In the UK, we have a slighter higher proportion of emissions from aviation than a lot of other European nations. Our aviation emissions are about 6.4 per cent of our total emissions, but in the EU aviation emissions are closer to the 4 per cent mark. Emissions trading is okay—in aviation, emissions are likely to grow in the future, while other sectors will find it easier to reduce their emissions—but at the moment, the cap is not strong enough to be in line with the standard on avoiding dangerous climate change within the EU's emission trading scheme. I hope that it will be strengthened in the future. We are concerned that we should do something sooner rather than later.

On the evidence that links economic growth to the aviation sector, we have been doing new research by looking at the documents that say that there is an economic benefit to having an aviation industry. There are areas of economic benefit, but some of the research and indicators in the data are dubious. We would like to do further research to try to bottom out some of the links that are being cited but which are not really backed up by the evidence.

**Gordon Dewar:** It is not me who is saying that there are such benefits—you might think, "He would say that, wouldn't he?" The bodies that are advocating that aviation growth should continue in Scotland are the SCDI, the chambers of commerce and local authorities. Those bodies have no axe to grind for the specific benefit of the aviation industry; they are motivated only by what they believe provides added value to the Scottish economy.

**Cathy Peattie:** Could the environmental impact of the aviation industry be better understood and reported? Aviation is the first thing that people look at when they are discussing climate change—they throw their hands up in horror about aviation.

**Gordon Dewar:** I would really welcome our having an informed debate for a change about the impact of aviation in this sphere. If we all stopped flying tomorrow, it would not make that much difference environmentally, but it would do a huge amount of economic damage and would raise a variety of social issues. We talk glibly about improving domestic rail travel. There are still not too many options for travelling from the central belt in Scotland to London and back to do a day's business. You certainly cannot do that journey by train in a day from the Western Isles, the northern isles or even Inverness or Aberdeen. We have to consider transport in the round. Scotland is a relatively isolated nation within the EU. We are more reliant on transport than just about anybody else.

**The Convener:** Has anybody seriously suggested that we all stop flying tomorrow?

**Gordon Dewar:** No, nor did I suggest that they had.

**Cathy Peattie:** BAA Scotland cites a report that concludes that technological advances, operational efficiencies and the use of low-carbon fuels could see aviation emissions fall back to 2000 levels by 2050. When could we expect to see tangible progress in those areas? Are we likely to see such developments accelerate in an era of rising energy costs? There is a lot of ambition, but when will progress be made?

**Gordon Dewar:** The process is on-going. Engine technology has moved on significantly in the past 20 years. I think that we have seen 40 per cent reductions in emissions. People say that we should be driven by the data. When Willie Walsh addressed the business community in Scotland just before Christmas, he made the point that, in terms of passenger kilometres, his fleet was more efficient than a Prius car. That is an interesting comparison. I want to have an informed debate about the best choices available, albeit that we will have to rely on emission trading to get the balance right. Remember that we are not arguing for growth regardless; we are saying that we would grow only when we could remain within a cap and within a trading scheme.

**Dr Bows:** One of the problems for the aviation industry is the maturity of the engine technology. There have been new developments lately in open-rotor engines, for example, but there are always trade-offs within the aviation sector. When you are trying to reduce noise, for example, you increase the weight of the aircraft and, therefore, increase the emissions. One of the key issues that we have considered is growth. We have efficiency improvements of the order of 1 to 2 per cent at the moment. That situation is likely to continue, given the maturity of the technology and given that there are not going to be radically different air-frame designs within the next 10 years or so. While growth rates are higher than efficiency gains, emissions will increase, so we must not think only about how we can further incentivise technology developments.

Alternative fuels are interesting and the debate about them has progressed in the past five years. Much more research and development on alternative fuels is taking place and that needs to be accelerated. All such measures need to be accelerated, but we also need to keep an eye on the growth rate. No matter how much we improve efficiency and alternative fuels, if the growth rate is high and kerosene is still used, we will have increased emissions.

**Shirley-Anne Somerville:** I will press Mr Dewar on his answer to Cathy Peattie's question about emissions falling back to 2000 levels by 2050. I appreciate that giving exact timeframes is difficult, but that timeframe is very long. Saying that the position will develop over time to 2050 does not take us much further forward on whether emissions will fall in 2049 or in five years' time. Can we have a bit of an idea about the cumulative emissions from aviation?

**Gordon Dewar:** I do not pretend to be an expert in all the various developments that are behind the reduction. Could I provide information in writing?

**Shirley-Anne Somerville:** That would help—thank you.

Your evidence cites the IPCC's estimate that aviation will contribute 5 per cent of the world's total human contribution to climate change by 2050. Given that emissions are already above the worst-case scenario that the IPCC scoped, what contribution should aviation make to getting us back on track to the central point that the IPCC discussed?

**Gordon Dewar:** My plucking out arbitrary forecasts of our share of those emissions would not add an awful lot to the debate. What is important is managing sensible caps in sensible trading schemes in the round. We have argued for several years to bring the aviation industry in line with others, which has not been easy. Many in the industry saw emissions trading as a threat, but there is now almost consensus that we should not avoid, but embrace that.

By 2012, we will be in the European emission trading scheme. That will allow us to recognise in an efficient way the fact that our emissions are growing. To allow that to happen, we must fund research and the buying of credits from other people. We will therefore give all the other industries incentives to invest in the new technology that will start to drive down emissions overall, which is the point of the scheme.

**Shirley-Anne Somerville:** In previous weeks, witnesses talked about the problems of emissions at height, which have more impact. What does the industry think about that? Will you explain a bit of the theory behind that?

**Gordon Dewar:** Again, it would probably be better for me to write to you. Suffice it to say that we acknowledge that emissions at height contribute more, as do some different combinations of chemicals that are up there. We acknowledge that multiplier effects will need to be applied to some emissions from the aviation industry. Science must be used to best effect in ensuring that we are as close to consensus as possible when we consider trading overall. I am happy to provide references to several scientific

papers that go into the matter in much more detail than I can aspire to give.

**Dr Bows:** I dislike the use of multipliers, because emissions are different—for example, some are localised and last for short times. One mistake that was made in the past—I made it when I started, too—was that people often used multipliers to project into the future. They just multiplied the CO<sub>2</sub> in the future by some multiplier, but multipliers change, because different emissions will emerge, and the CO<sub>2</sub> does not go away, unlike some other emissions. The situation is more complicated.

We should concentrate on CO<sub>2</sub> for trading and perhaps consider oxides of nitrogen emissions, which increase some greenhouse gases and reduce others. However, we should think about and treat the condensation trail issue separately.

**Shirley-Anne Somerville:** We have heard that BAA is reducing emissions at its airports; that is separate from emissions from flights. What successful measures has BAA employed, or does it plan to employ, to reduce its emissions?

**Gordon Dewar:** We have set ourselves energy consumption reduction targets for all our airports, on which I would be happy to give the committee more detail. Reducing emissions also involves behavioural aspects. Surface access is a big driver of our emissions footprint and has a wider reach.

We have schemes such as the public transport fund, where we take an average of 20p from every parking activity for which we collect revenue and reallocate it for investment in public transport. Marjory Rodger talked about that earlier. We give start-up funding to some of the more developmental initiatives; indeed, we prop up some of the less commercial bus networks that operate around our airports.

15:45

We are also mindful of the fact that even different types of transportation by car have a different impact. The worst form of car access to an airport is kiss and fly, where someone gets dropped off, because that generates two return trips to the airport. Only one return trip is generated if someone leaves their car at the airport.

We have a hierarchy within our transport strategy that tries to encourage people. It uses pricing mechanisms to manage the situation and makes the person who benefits pay so that we get the best possible mix.

You will be aware of some bigger projects. The tram project is on-going in Edinburgh, and there will be a fixed-rail line to Edinburgh airport in the

not-too-distant future. Similarly, Glasgow airport rail link is undergoing development work. We have contributed land and financing to those projects and are helping to make them happen. We are trying to increase our modal share of public transport, which we know is more effective. However, that is not to say that we think that we can do away with car access. For many people, the car is the only credible option for them to get to the airport.

**Shirley-Anne Somerville:** There is a bit of scepticism because parking provides an excellent revenue stream for the airport, so perhaps it is not in your interests to discourage people from parking. Can you try to convince me that that is not an issue?

**Gordon Dewar:** I will not try to convince you that that revenue is not important. However, we try to achieve a balance. We have a sensible structure, and people recognise the facilities that we provide. For example, we make sure that anyone who uses the bus is not exposed to having to support the costs of providing car parking. It would be a double disincentive if someone paid a bus fare and then had to meet such costs. We are trying to get the balance right.

We have to remember that we are a privately financed business, which is quite unusual in Europe, and yet we are national assets that get no public funding whatsoever. Every penny that we take from non-airline sources—for example, by charging people less to land—will mean that we can grow the attractiveness of our networks. Although we are talking about climate change, I will not pretend anything other than that we believe that growing our network and increasing our connectivity, particularly for direct flights that avoid the need to hub through other airports, is at the core of our business, and it is worth accommodating that within a wider climate change agenda because of the economic benefits that it provides.

**Des McNulty:** What has been the annual increase in your parking revenue during the past three years, and how many additional vehicles does that represent on a year-by-year basis?

**Gordon Dewar:** Having reflected on a question that was asked earlier, I think the best response would be to give you a breakdown of modal share for the past few years to show you the trends, if you would be happy with that.

**Des McNulty:** I would be quite interested in that, although I am sure that you know what the figures are for the year-on-year increases in your parking revenue. I would be very surprised if you did not.

**Gordon Dewar:** Again, I do not think that giving you an absolute number would give a lot of context. I would be happy to share some idea of

the proportion of our income that parking revenue represents, and contrast that with our public transport share, which is growing strongly.

**The Convener:** I would like Dr Bows to clarify something. You argued that, in looking at the additional damage caused by aviation emissions, the contrails issue should be considered separately. How should it be considered? In what way should it be taken into account?

**Dr Bows:** If you want to avoid forming a contrail, you might want to change altitude, which might increase the fuel burn. If you were to ground an aircraft tomorrow, its CO<sub>2</sub> emissions would still be there for the next 100 years, whereas the contrail disappears very quickly.

Given that the contrail is localised and lasts for a matter of minutes and that CO<sub>2</sub> emissions last for 100 years, the science and policies that might address them are very different. I would not want to say how we should go about considering them, except to note that it would be difficult to trade a contrail.

**Alison McInnes:** I come back to a more general question, which I should perhaps have asked earlier. Do any of the panel have a view on the 2050 target and the interim targets in the bill?

**Dr Bows:** Focusing on 2050 and having it as something that is frequently spoken about means that people think very long term. The important thing is the emission pathway that you travel down to get to your aspiration in the future—the 2050 target. The target is likely to change depending on how much emissions increase in the short term. If they increase more now than you think they will, the 2050 target has to drop.

I would advocate an emission pathway. The interim target seems to be along the kind of emission pathway that we want to follow, but we must also think carefully about where we think emissions will go in the next five, 10 or 15 years. The 2008 UK act suggested that emissions in 2008 would be somewhat lower than they were. That mistake has been made already over only a few months, which means that emissions in the future will have to be reduced by more.

**Alison McInnes:** Would you prefer interim targets to be brought forward?

**Dr Bows:** Yes.

**Robert Ashdown:** From the shipping perspective, ships are very long-life assets. A ship will last for 20 to 25 years, so we are only two or perhaps three generations of ships away from 2050. Ironically, that makes it easier for us to meet the 2050 targets than the 2020 targets, because we are already locked into the technology that we have.

Shipping is a mature industry that has been around for a very long time, so many technological advances have already been implemented. We are looking for step changes in technology—fuel cells, solar power, hydrogen and that sort of thing—to help us to meet the longer-term targets. It is difficult to see those coming on stream in time to have a real impact by 2020, which is not to say that I underestimate the importance of early action—it is all about the area under the curve—but for our sector the longer-term targets are more achievable than the medium-term ones.

**Gordon Wilmsmeier:** It is important to enhance technical development and evolution in shipping. Something has been done but, for a long time, shipping was neglected because it was argued that nothing could be done because it is a global industry. There have been a lot of gaps, so it is necessary to get a grip on them and start innovation. There has not been huge pressure on shipping to innovate. In certain trades, there has been innovation in paints and hull shapes. We can also improve the loading capacity for certain ships. We must introduce incentives to strengthen technical innovation within shipping. We should also transfer from certain types of fuel to marine diesel oil, which contains fewer other air pollutants. CO<sub>2</sub> is an important issue for shipping, but we must consider all the air pollutants. It is important to find a way to incentivise that push. In shipping, it is obviously difficult to push technological development from just a Scottish perspective; there is no national flag in Scotland, so how can you push technological development? The matter needs to be discussed at international level.

**Robert Ashdown:** I agree that the shipping industry would benefit greatly from greater investment in research and development. It is not right to say that we have had no incentive. Fuel costs are approximately 30 to 50 per cent of voyage costs, so we have always had the strongest possible commercial incentive to reduce fuel consumption. Indeed, every generation of ships has been cleaner and more efficient than the last for purely commercial reasons.

We have not benefited from other high-end aspects. In the aviation industry, for example, military technologies and the space race have allowed cutting-edge technologies to filter down to civil aviation. We do not really see that in the marine world, which does not have a high-end, non-commercial sector to drive technical innovation, so R and D would be welcome.

I disagree with the point about moving to distillate fuels, on which the International Maritime Organization has just had a long, two-year debate. I will spare you the details, but the decision was made not to move to distillate fuels. Distillate fuels

are about 3 per cent more carbon efficient than residual fuels, but to produce distillate fuels in the volumes that are necessary for the international shipping industry, refinery production would have to increase to such an extent that there would be a net 15 per cent gain in carbon emissions. Distillate fuels are not the answer to reducing carbon emissions from shipping.

**Alison McInnes:** I want to explore that further; I had intended to come on to the issue later, but it is appropriate to pick it up now.

It is clear that we have not seen the innovation that we should have seen in the shipping industry. You have given us some of the reasons why that is the case, but that pushes me towards favouring regulation, as self-regulation does not seem to have worked. The previous panel told us that the bus industry was investing in measures to reduce carbon emissions on a commercial basis. I do not think that the international shipping industry has invested as much as it needs to, which does not give me comfort. Can you give me some comfort as regards the IMO's commitment to bringing about international action in the near future?

**Robert Ashdown:** Absolutely. At the next meeting of the IMO committee that deals with such matters, we hope that a mandatory energy efficiency design index will be introduced, which will give new ships a rating, from A to G, such as one finds on white goods. That will allow owners and charterers—we must not forget the importance of charterers in the shipping industry—to choose the cleanest ship for their transport purposes. We hope that that measure will come into force quickly.

**Gordon Wilmsmeier:** It is important to bear in mind that the IMO regulation might solve certain problems that we have in Europe, but many countries have not signed the IMO agreement, so we might just be pushing problems towards other regions of the world, which is not a solution. It is not a solution to achieve high standards in Europe by sending ships and aeroplanes to be used in other regions.

We see that happening in Scandinavia, which has been quite proactive in imposing differentiated environmental port charges and fairway charges. All the ships in that region now have newer technology and the ships with older technology have moved out, but they have not disappeared. If we want to get rid of the old technology, we must ensure that the ships that use it disappear and are not just shifted geographically.

**Des McNulty:** Gordon Dewar and Dr Bows mentioned that aviation is to be included in the EU emission trading scheme, which will mean that aviation emissions will have to be measured and reported on anyway, so will including aviation in

the bill make any difference, or is it simply symbolic? What is your view on that?

**Dr Bows:** I come back to the idea of consumer and producer-based approaches and the analogy with the power industry. Because of the challenge that we face on climate change, we need to push every button that is available. The inclusion of aviation in the emission trading scheme does not mean that other policies should not be brought on board. Most sectors are subject to a suite of policies, but the aviation sector does not appear to be subject to quite as many policies on carbon emissions and energy efficiency. Robert Ashdown mentioned the energy efficiency ratings for ships, which might come to the fore, but no such ratings exist for planes, and there are no regulations on CO<sub>2</sub> emissions from airports, although there are regulations for other emissions. My view is that it is a good thing for aviation emissions to be included in the bill.

**Gordon Dewar:** As I said at the outset, we are concerned that including aviation emissions in the bill might end up having unintended consequences. From the point of view of effectiveness and equitability, action on the issue should be taken at the level of the European market as a minimum.

However, we understand the political necessity of addressing the issue and I guess that we are supportive of the proposal in principle. It was interesting that, when we spoke to the Scottish Government as part of the consultation exercise, it made it clear that it regards the provision as an enabling provision that will give us time to get into the emission trading process by 2012. There is a gap of three years or so in which to get there. If that is the approach that is being taken, I would be quite supportive of including aviation emissions in the bill, as long as we are mindful of that endgame. I have no difficulty with the idea that we should be pushing on all fronts, but we must maintain equitability and not hamstringing ourselves in an extremely competitive environment.

I echo my shipping colleague's comment that there is no doubt that it is not the case that unilateral action will lead to no change. We have already lost large numbers of flights because airlines have chosen to fly from other European airports to gain the most marginal or fringe commercial benefits. We make such changes at significant risk of fundamentally changing the attractiveness of Scotland as a market.

16:00

**Des McNulty:** Pursuing that a tiny bit further, I want to pick up the point that Dr Bows made about the advantage of having a suite of regulations. The different sets of regulations should not try to force

or produce different kinds of behaviour. If aviation emissions are included in the bill, how do we establish a system of monitoring in Scotland that is not only consistent with the European approach but potentially adds something to that approach? I am asking not just about the principle of including aviation emissions but about the practicalities of doing so and how we might add value.

**Dr Bows:** The cap on the emission trading scheme is currently so loose that the scheme is nowhere near aiming for a 2°C target. One way forward might be for Scotland to use the same method of allocating aviation emissions but with a more stringent cap. Scotland could use basically the same approach but just do things more stringently over the course of the few years before the emission trading scheme starts. If the emission trading scheme is still not in line with a 2°C target when it starts, Scotland could continue with its previous approach until we have a global cap that will avoid dangerous climate change rather than just act as a mechanism to get people used to emissions trading.

**Gordon Dewar:** I am 100 per cent opposed to that argument. That is exactly the approach that would make a fundamental difference to us. If we impose additional costs only in Scotland, all that will happen is that aircraft will be reallocated to other airports in Europe, so we will lose the economic benefit without making a jot of difference to overall emissions.

**Dr Bows:** I should add that I would give the same advice to the UK, French and Dutch Governments. In other words, all nations are considering tackling climate change through using targets. The assumption must be that, if we want to avoid dangerous climate change, everyone must eventually come on board. Some countries might move earlier than others but, at the end of the day, everyone will need to follow. Scotland will not be able to do that alone.

**Des McNulty:** One point that Adair Turner makes when talking about achieving a low-carbon economy within the framework in which we must operate is that we should separate out interim targets from intended targets—I am talking about targets more generally—based on our commitments at Copenhagen and our European commitments. If we go for the idea of having a harder target rather than a weaker target, how would that translate in aviation terms? The suggestion is that the target might be for a 42 per cent reduction rather than a 34 per cent reduction, although the figure depends on which base year one starts with.

**Dr Bows:** Including the aviation sector in a trading scheme will not necessarily require aviation to reduce its emissions because it will be able to purchase emissions from other sectors. If

the overall cap has two different levels for the intended and interim targets, all the sectors under the cap will be affected. The only effect on aviation might be that it will need to pay a little bit more for the emission permits that it purchases. Including aviation does not necessarily mean that aviation growth will be reduced significantly, particularly at the moment when the cap is so high that the carbon price is very low.

**Des McNulty:** I want to pick up what Dr Bows said about aviation needing to pay more. Who in aviation would need to pay more?

**Dr Bows:** My understanding is that the costs are likely to be passed on to passengers. That is my understanding from various interviews with the aviation sector about what would happen if the airlines had to pay an additional charge.

**Gordon Dewar:** I support that point. Inevitably, the user pays in the end.

**Des McNulty:** If Scotland or the UK goes down the route of including aviation emissions, can we quantify what the implications of that would be for aviation prices, or can that not be calculated at this point?

**Gordon Dewar:** I do not think that there is enough certainty about the price of carbon or how the interaction will go. It will depend on how people respond to the need to reduce carbon overall. There is certainly recognition that the cost of emissions will increase over time, and I am sure that there will be a lively debate about the appropriate cap to be set. It seems likely that the only direction in which carbon costs will go is up. The aviation industry is well aware that that means that its costs will increase and that, ultimately, prices will increase.

**Des McNulty:** What is the best method of organising that? Is it through what is, in effect, a taxation scheme, or is it through other approaches that bear more on the industry?

**Gordon Dewar:** Trading will be a far more efficient method of recognising the true cost of emissions, because it is about creating a market in something that allows people to respond. In the past, we have had taxation. For example, we have air passenger duty, which is a significant burden on the ticket price. In many cases, APD taxation accounts for more than half the ticket price. Unfortunately, it is a blunt instrument and the money has not been reinvested in new technologies or in the ability of other industries and sectors to reduce emissions. It might have reduced travel at the margins—in fact, it certainly has—but it has not had the spin-off benefit of money being reinvested in the longer-term gains that trading will allow.

**Des McNulty:** That gives me the industry's point of view, but I am also interested in the impact from the consumer's point of view. What is the difference for the consumer between a trading arrangement and a taxation system?

**Gordon Dewar:** An efficient system should allow the consumer to make sensible choices. If the aviation industry buys credits to allow it to offer a service that people still pay for, in effect, they are getting that efficient choice. A traveller might have a choice between travelling by train, flying, or perhaps not travelling at all, and they will take an informed view by considering all the options that are on the table. The best way in which to make sure that that is an efficient option for them is to ensure that we have a true recognition of the price of carbon. The trading scheme should allow that to happen.

**Des McNulty:** I will change tack a wee bit. In response to an earlier question, you said that Scotland is in a relatively isolated position in Europe. That is undoubtedly the case. We are part of an island that is remote from the European continent. Presumably, that partly explains why aviation usage and emission rates are higher in the UK. The central belt of Scotland is 400 miles from London and 500 miles from the Channel tunnel, so we probably do not have the surface alternatives that other people in Europe—or perhaps even people in the south-east of England—have. If we want to do business with other parts of Europe or travel there for leisure, we are at a comparative disadvantage geographically. If we are the ones to wear the hair shirts—if I can put it in that way—in capping our systems, are there any issues in that for Scotland?

**Gordon Dewar:** There are—that is what we are saying. We need to be aware of why we are doing things differently—why we are setting higher targets, or using the mechanisms differently—and we should bear in mind the unintended consequences.

As I said, people want to follow wise leadership. It is right that the developed nations take a leadership role on emissions and climate change. To my mind, there is no justification for pulling up the ladder behind us. However, we need to know that we are setting a path that other people will want to follow because, ultimately, we want to persuade everybody else to join us.

We should not impose artificial costs on our accessibility to markets. Let us not forget that we are talking not just about people who fly off on holiday but about people who fly into Scotland for tourism, which is our biggest industry. VisitScotland recognises the importance of that. We are also talking about getting to markets, including world markets such as the far east, where we know our wealth of the future will be

based. If we start to make it more expensive or difficult to travel, we will do ourselves a disservice and will not show leadership or set a path that anybody else will want to follow.

**Dr Bows:** At the end of the day, if there was a cap for all sectors, the choice could be made to allow aviation to consume the entire budget. In that scenario, there would be a reasonable amount, or perhaps a significant amount—I do not know, as I have not done the numbers—of growth in aviation in Scotland. That would be a choice that would be made. The other issue is the shipping industry. If it was included in the cap and the target, there is a long-term issue with technology, as has been stated. Given the lead time that is required to reduce emissions, it is likely that emissions could be reduced in the long term, but not in the short term. Thought would therefore have to be given to which of the sectors would be allowed, or chosen, to use up the biggest part of the budget. Ultimately, the cap will have to be in line with a climate change target.

When I interview people from industry, I hear that their sector wants to be able to consume the majority of the budget, but not all sectors can do that. We have published a paper that shows that, ultimately, emissions trading cannot reasonably happen after 2030 if we are to avoid a 2° rise. However, setting stringent caps and allowing the sectors that wish to use up more of the emissions to do so within a trading scheme is the way to go. There will still be some growth in the aviation industry in Scotland.

**Gordon Wilmsmeier:** Des McNulty's question takes us back to something that was said earlier. Why is aviation singled out? What about co-modality? In Germany, the route between Frankfurt and Cologne, which is just less than 300km, was traditionally done by aeroplane, but it is now done by train. Lufthansa flights and all other flights between the two cities were cancelled because the train was competitive in terms of speed. Even though Scotland is on the periphery, if high-speed rail was delivered, there would be sufficient links within the UK to allow the consumer to choose other modes of transport. The time is right for that. We should not forget the issue of security in aviation. It is much more convenient to get on a train at the station than to go through all the hassle at an airport. We must also consider the point that was made by the previous panel about complex travel time. The travel time by air is not just the one-hour flight to London, as people need to get to the city centre. Even today, with relatively slow trains to London, the train ride from Edinburgh to London might already be more attractive, particularly given that people can use their time better, which is especially important for business.

We need a clear statement from the Government that it is willing to invest in modern technology. That will not come about in a couple of years, because it is a long-term investment. Spain and Germany have made a long-term investment in high-speed rail. Such investment would not have an effect tomorrow. On certain routes, there is an option to move towards a co-modality approach. That takes us back to issues to do with convenience for travellers, such as integrated ticketing and just getting off the plane and getting on the train.

**Des McNulty:** That takes me neatly on to the point that I was trying to get to. Is the argument that, rather than have a cap or an arrangement that takes into account international aviation, we should take into account aviation as a whole? If the overall objective is to reduce or control aviation emissions, should we consider how to reduce aviation use where there is a feasible alternative? That approach could permit more international aviation where there is no alternative. Should we consider that policy issue?

**Gordon Dewar:** I believe fundamentally in consumer choice. I would have no difficulty if the Government wanted to invest in a high-speed rail link. That is long overdue and it would be a great asset for the country to pursue. People will then vote with their feet and their wallets—that is important. At present, it does not cost the Government any money at all to have the aviation industry providing links to London or anywhere else, because all the money is private. However, high-speed rail will have a significant cost. As well as the infrastructure cost of any new high-speed rail links, in most cases rail franchises receive a significant on-going subsidy for running costs. That is a decision for the politicians. There is not an either/or situation—it is important that people have a choice. I am reminded that there are still six flights a day between Brussels and Amsterdam, which are less than 100 miles apart and which have one of the best high-speed rail links in Europe. People want choice and the different modes offer different levels of service.

16:15

**Dr Bows:** If we had the right cap for climate change, the trading scheme would be all that we would need. While we do not—and I do not envisage us having the right cap for some years, although maybe it is different in Scotland—we have to consider suites of policy measures, particularly for sectors that already have a large proportion of emissions or sectors whose emissions are likely to grow significantly in the future. That would send the right signals.

In a set of interviews that I did about four years ago, manufacturers in the airlines told me that,

other than fuel efficiency—and the price of fuel was low at the time—there was no added incentive from anywhere to drive up fuel efficiency and look at alternative fuels. That situation has changed because of current fuel prices, but we need additional buttons to press to send the right signals.

**The Convener:** Gordon Dewar said clearly that people should continue to have a choice, even if there are high-speed rail alternatives at some point in the future. He also said that he expects the aviation industry to grow. We all understand that such growth will not necessarily be matched by efficiency improvements, so the conclusion is that aviation emissions will continue to grow rather than reduce. How much slack should the rest of the economy take for aviation growth?

**Gordon Dewar:** That should be decided through emission trading. Regardless of the conversation about whether the cap is set at the right level now or should be tightened or about what it will be in the future, it is sensible to leave it to the emission trading scheme so that people can value the cost of emissions, factor that into investments and use the money that they receive from trading to invest further in their ability to improve the overall emissions level. If we presume that we can concentrate on one set of emissions rather than another, we will penalise a sector unnecessarily and might create unforeseen outcomes. More important, we will not offer the best incentives to people to invest where we can make overall emissions reductions.

**The Convener:** Surely that same criticism applies if there is no focus on reducing emissions in one sector—if aviation does not have to make urgent changes—and we just expect every other sector of the economy to be penalised.

**Gordon Dewar:** But growth will not happen except within the overall cap. If aviation cannot buy its share of what it thinks it needs or wants, it will not be able to grow—that is the point of the cap under the emission trading scheme. Therefore, growth can happen only if the trading scheme is effective.

**Alison McInnes:** In its written submission, the Chamber of Shipping highlighted the difficulties that it foresees in measuring accurately Scotland's share of international emissions and Robert Ashdown has spoken about that today. The chamber also said in its submission that including international shipping in the bill could be a retrograde step that might hinder international negotiations on emissions reduction in the sector. What are the chamber's concerns on those issues?

**Robert Ashdown:** Broadly speaking, there are two ways to measure emissions from ships: they

can be measured on physical activity or on economic activity. Depending on which way Scotland chose to measure its emissions, that measure could be in conflict with the proposals from the IMO. I am not sure about the interrelationship between the Scottish and English Governments, but the line that the UK Government takes within the IMO might be curtailed by decisions that you take in Scotland.

**Alison McInnes:** Are you aware of any contact between the Scottish Government and the IMO on the matter?

**Robert Ashdown:** The IMO is made up of nation states, so only the UK has a seat and, of course, shipping is not a devolved matter.

**Alison McInnes:** No, but clearly shipping is being considered in the bill, so I wondered whether there had been any discussion about it.

Official national atmospheric emissions inventory figures have now been published that allocate emissions from shipping to Scotland, based on the Department for Transport port movement data. How robust are those data?

**Robert Ashdown:** I doubt that they are robust at all. We have several ways of measuring emissions from shipping but, unfortunately, they are all inaccurate. It is an exceedingly difficult sector to measure because unlike aviation, ships can carry enormous quantities of fuel; they do not need to refuel every time they touch a port. A ship can come into a Scottish port and then disappear; it might take on no bunkers or 100 per cent of bunkers. It depends entirely on its voyage patterns and the bunker capacity of the ship.

**Alison McInnes:** I note from your joint letter with WWF to the Committee on Climate Change that

“the two organisations ... have committed to working together ... to assist the UK government to quickly develop a methodology for measuring the carbon emissions from ships”.

What progress have you made on that?

**Robert Ashdown:** It is very early days. The Climate Change Act 2008 came into force only in December last year. We acknowledge the Committee on Climate Change's recommendation for the Government to take account of international shipping emissions, for measurement purposes only—that is key. We fully endorse that position. We need to be able to measure the industry to set an accurate baseline, so that we can make reductions in line with targets and achieve a position under the level of the cap. I do not disagree with any of that philosophy.

The question arises how to measure that. We have teamed up with WWF to deliver quickly the most robust and accurate measurement that we

can, so that the UK Government has a handle on what shipping's share is. However, what does that actually mean? Are we talking about UK-flagged ships, ships that operate in UK territorial waters or the UK's contribution to international shipping emissions? To a large extent, the volume of shipping measures world trade—the plot lines are broadly parallel going up the graph—so perhaps we could do something as simple as taking Britain's share of global GDP and declaring that we are responsible for that share of international shipping emissions. There are a number of ways of doing that. We think that the economic measurement is the most appropriate way.

We are meeting representatives of the Office of Climate Change on 3 March to discuss further the letter that I have appended to our written submission, and we very much hope that, with work from our three organisations, the Office of Climate Change will be able to make a firm recommendation in its report in September.

**Gordon Wilmsmeier:** I completely agree with Rob Ashdown. The issue is difficult, and we should probably be measuring the trade flows. Different ships are used, and it is hardly possible to get data on what ship a container might have used on the five legs of its journey to Scotland. Ship details and technical data on ships could be obtained from the IMO, but freight data would need to be linked to the ship that delivered the goods to the Scottish port. If we consider things from a Scotland-only perspective, a lot of cargo is brought into ports in the south of England and then moved north by truck or train. You should not just consider the shipping aspects; you need to examine the whole transport chain. There is scope to reduce CO<sub>2</sub> emissions through increasing the length of the maritime leg of the whole voyage. That might be of benefit—it could contribute to a reduction in carbon emissions—but just taking the shipping leg into account is not sufficient.

**Alison McInnes:** You said earlier that we have weak policy levers to influence what happens in shipping, which I understand. What can the Scottish Government do to assist the shipping industry to reduce its emissions, including those caused by ships in harbours?

**Robert Ashdown:** A lot of the focus today has been on caps, trading and so on. The important thing in the longer-term carbon debate is to lock in carbon savings. That means infrastructure. If we want to move to electrically powered, fuel cell ships, they will need to be able to plug in to recharge in ports.

At the moment, we are running at about 98 per cent of port capacity, which is a dangerously high level. That causes a lot of congestion. Ships might arrive and have to wait for a week, burning fuel, because they need to provide their own power in

fairways. If we had greater port capacity and better port infrastructure in this country, we would save a lot of carbon emissions. If the hinterland infrastructure for lorries bringing goods into and out of ports was improved, we would reduce the carbon burn of the lorries that provide co-modality.

Governments can act positively in a number of areas to reduce overall carbon emissions from the shipping industry.

**Gordon Wilmsmeier:** One thing that is relatively easy is cold ironing, which is when ships use the electricity supply on the quay so that they do not use their engines while they are in port. If the energy generation is right, there is a reduction not only in CO<sub>2</sub> emissions but in NO<sub>x</sub> and SO<sub>2</sub> emissions, which act very locally.

The United Kingdom has a specific port operation scheme. The trust ports have not been the most positive in their approach, because they have not really contributed to port development. The UK has some of the least developed ports in Europe, because the trust ports have not made the right decisions—they sometimes find housing more attractive than port development. That is an important issue, because it means that maritime interests are not developed, and therefore ports are not attractive for some shipping services.

This is the Scottish climate change bill, and ferries are a Scottish issue. The ferries that operate in Scotland are old. They have served their time and should be replaced. That is an issue on which the Scottish Government can act directly by strengthening technological change.

**Shirley-Anne Somerville:** The evidence from the Chamber of Shipping states:

"Any reductions in ships' carbon emissions must therefore be achieved in a way that permits growth in the volume of goods shipped by sea."

How can that be achieved in the timescale that the scientists tell us is necessary to stop climate change?

**Robert Ashdown:** In three words: market-based instruments. The growth of the industry is the result of the growth in global population and world trade. As I have said before, shipping is a service industry. We mirror global trade, and we know that our emissions will grow—they are likely to grow more quickly than technological innovations will enable us to decrease them. We recognise that we may have to invest in other sectors so that they can make the carbon reductions that we cannot make until we reach that step change in technology.

**Shirley-Anne Somerville:** I was about to ask you about the changes in technology and energy efficiency. Will you describe the successes to date and give us a rough idea of what is achievable in the next 10 or 20 years?

**Robert Ashdown:** Without wishing to sound facetious, it all depends on what you call an existing ship. If you call an existing ship a ship that is 15 or 20 years old, it might be possible to make a 30 or 40 per cent reduction by using a brand new ship from the yard. If you call an existing ship a ship such as the high-end, high-spec Queen Mary II, which was launched last year, if you threw absolutely everything at that ship, and cost and passenger comfort were not an issue, you might make a 5 per cent saving. Technological savings can be made, but they are increasingly hard to achieve.

We cannot address the carbon issue in a vacuum. A number of years ago, we had very good hull coatings based on TBT—tributyltin oxide—paint, which harmed marine life. Quite rightly, such hull coatings were banned, but the efficiency of ships decreased. Similarly, there is the issue of addressing air pollution resulting from oxides of nitrogen and sulphur—NO<sub>x</sub> and SO<sub>x</sub>. If you look at the curve of ships' carbon emissions between 1912, when the first oil-burning ship was launched, and 2005, there was a steady reduction. That has now flatlined, because the trade-off for cleaner NO<sub>x</sub> emissions is increased carbon emissions. We are perpetually trying to juggle all of those issues to deliver net environmental benefit. Unfortunately, we are constrained in what we can do to deliver clean carbon technologies, because we have other factors to consider.

**Gordon Wilmsmeier:** Sails have been used successfully on container ships crossing the Atlantic. Such good examples should be strengthened. However, from a Scottish perspective, that requires an industry that can innovate. You need research to support such innovation. Scotland could contribute by investing in research and innovation.

**Shirley-Anne Somerville:** You said that shipping requires a global deal, in order to overcome the problem of double counting. However, could this Scottish bill be world leading, if it includes international aviation—pause—and shipping? When we get to Copenhagen and are considering a global deal, we could be leading, and the bill could play a part in shaping the deal. We should not wait; we should take the initiative and lead the rest of the world.

16:30

**Robert Ashdown:** As I said before, the issue is not desirability or ambition but practicality. You have to ask yourselves how policies would be implemented. The bill is about Scotland taking legal responsibility for carbon emissions, but you wish to take legal responsibility for something that you simply cannot control. If you impose reductions on United Kingdom ships, those ships

will simply not go to Scottish ports. A great deal of north European traffic heads through northern Scottish waters, but if you try to take responsibility for emissions from those ships, you will find that, because of the rights bestowed by the United Nations Convention on the Law of the Sea and the rights of free passage, you can do absolutely nothing to restrict their movements. I hope that our written evidence explained the situation more clearly than I am doing now, but it is extremely difficult for any nation state or any regional body to regulate the international shipping industry.

**Shirley-Anne Somerville:** Let us leave aside the issue of regulation and consider simply the measurement of emissions for inclusion within Scottish targets. Should such measurement be included in the bill, to ensure that the picture is holistic? The industry could then get behind the bill and help to ensure that Copenhagen results in positive changes.

**Robert Ashdown:** You might briefly have been out of the room when I said that my comments were solely about reduction targets for international shipping. As long as the administrative burden is not completely horrific, measurement should be possible, although it would be complicated. Committee members will have seen the letter to the Office of Climate Change in which we address those issues. However, measurement would be possible. The real difficulty would arise only if you imposed reduction targets on international shipping. For reduction targets to be meaningful, they will have to bite; if they bite, they will have a commercial impact and cost; and if that is the case, operators, as commercial businesses, will legitimately seek to avoid those costs where they can.

Measurement provisions can, of course, be included. Indeed, the Climate Change Committee recommended that UK climate change legislation should include them. If you wished to do the same thing in the Scottish bill, you would have to ensure that you did not double count under the UK legislation, but that would be a positive move and the Chamber of Shipping would seek to work with you. If you established a climate change committee north of the border, we would seek to work with it to define the most accurate and robust measure that we can.

**Shirley-Anne Somerville:** My apologies for missing part of your evidence earlier—I had to attend another committee briefly—but I am back now.

**Gordon Wilmsmeier:** I would like to answer the question and to underline Robert Ashdown's points. Measurement is extremely important. We cannot consider one mode, because we have to consider modal shift. Only if we measure modal shift can we see whether we have actually

achieved anything. You cannot leave something out and not measure it. There is no point in saying that you have reduced shipping if you do not measure whether movements are now taking place by air or by truck. You need to measure all transport modes.

You will not be able to impose legislation on certain things, but you should look on your own doorstep, as I said earlier. I know that I keep hitting on the same point, but ferries and coastal shipping are on your doorstep. They are what you can influence, and they are what you should focus on. That is where you have legal powers to change things and to drive innovation. For example, you can have influence over and drive innovation in ports. You can offer incentives and advice on carbon emissions at international shipping level, and you can measure those emissions, but it will be important for you to show leadership in what is happening in Scotland, so that you can say that you have tried this and this, have put this and this in place, have renewed your coastal shipping fleet and your ferry fleet, and have improved your ports, equipping them with up-to-date technology. That can be achieved independently of others.

**Cathy Peattie:** I would like to pursue the issue of measurement. When responding to my colleagues, you seemed to accept that measuring emissions, especially around the coast, is important, but I do not understand why there is a commitment to measure emissions if there are no targets. If there are no targets, how can we monitor what is happening?

**Robert Ashdown:** Our answer was predicated on the fact that you cannot change behaviour purely by measuring emissions. We argue that any change of behaviour would be negative: ships would simply stop coming to Scottish ports and go to English ports, and the cost of goods would be driven up. However, measurement is important, so that Scotland knows what its responsibilities are. If the trajectory curve already includes some measurement of shipping, it will not come as such a great surprise if and when—in three or four years' time—the IMO or the European Union imposes a climate change scheme on shipping. That is why we think that measurement is beneficial but we draw the line at reduction targets.

**Cathy Peattie:** If the other European countries got involved in measuring and setting targets, surely there would be an advantage to Scotland in having led the way?

**Robert Ashdown:** I am not aware of any other European countries that are taking unilateral action in that fashion, primarily because they are equally convinced of the arguments for global or, as a second-best step, regional legislation. I

cannot see what advantage would accrue to Scotland from setting targets that will almost undoubtedly be subject to international bargaining once the issue reaches more international forums.

**Cathy Peattie:** So setting targets for emissions would be bad for Scotland.

**Robert Ashdown:** The ports represent a significant amount of the Scottish economy and provide a significant number of Scottish jobs. Anything that harmed their commercial competitiveness would be bad for the Scottish economy.

**Cathy Peattie:** Ministers have a policy commitment to aim for 3 per cent year-on-year emissions cuts. How well placed is the international shipping sector to deliver such cuts, even if they are not included in global targets? You have probably answered the question by indicating that there is a lack of commitment to deliver cuts, but I am still interested in hearing your views.

**Gordon Wilmsmeier:** To tell you the truth, the question is difficult to answer. Let me put it this way—the consumer can contribute to reducing emissions from shipping. If you stop buying kiwi fruit from New Zealand and buy them from Italy, you contribute to CO<sub>2</sub> reduction, because the goods are not moved a long distance. It comes down to what consumers use. If they go back to using locally and regionally produced food, CO<sub>2</sub> emissions will be reduced. If people continue to eat strawberries from the Canary Islands or from Chile, it will have a huge CO<sub>2</sub> impact. However, eating Scottish salmon instead of Chilean salmon, even though it is a little more expensive, has a positive impact on CO<sub>2</sub> emissions. It may be a good idea to address the issue through the shipping industry, but consumers need to be aware of the CO<sub>2</sub> emissions that they produce as a result of their consumption.

**Cathy Peattie:** Are you saying that the shipping industry is not really responsible for CO<sub>2</sub> emissions, and that they are an issue for someone else?

**Gordon Wilmsmeier:** It is responsible in so far as it can achieve technological efficiency, but the demand for shipping is generated by us.

**Cathy Peattie:** I know what you are saying.

**Robert Ashdown:** The Chamber of Shipping recognises fully that we, along with all other sectors, have a responsibility to reduce our carbon emissions in line with societal expectations, and we do not shy away from that. We are keen to deliver carbon reductions in an efficient and robust manner, so that we can deliver real carbon savings. As we said earlier, this is not a zero-sum game. By getting it wrong and penalising shipping—which is the most efficient form of

transport—we might drive carbon emissions up. We must be careful how we approach the issue and ensure that we put the right policies in place.

I disagree slightly with Gordon Wilmsmeier, because, unfortunately, it does not help to buy goods locally. The food miles argument was debunked a couple of years ago. Lamb that is imported from New Zealand has a lower carbon impact than lamb that is grown in Wales, because shipping is so efficient and the farming in New Zealand is much less carbon intensive. The sums just do not add up. The same goes for tomatoes that are grown in poly tunnels. Tomatoes that are grown in Spain over the winter and shipped here are less carbon intensive than tomatoes that are grown in heated poly tunnels in the UK. The argument for local produce reducing carbon emissions is a complete non sequitur.

**The Convener:** I hope that you agree that the statement that you have made is not absolute. You say that local production does not reduce carbon emissions in every circumstance, but it is inappropriate to say that it never does. Do you agree that, if potatoes are grown in 10 different countries, they might as well be used within those countries, rather than be whirled around the world a few times before they are consumed?

**Robert Ashdown:** I am sure that there are one or two instances in which local produce is more carbon efficient.

**The Convener:** Yes, I am sure that there are one or two.

A moment ago, you said that the shipping industry takes its commitment and obligation to reduce its emissions seriously. However, five or 10 minutes ago, you said that it is important that we allow for the possibility that shipping emissions will increase. Which is it to be?

**Robert Ashdown:** Both.

**The Convener:** The level of emissions will go up and down at the same time?

**Robert Ashdown:** No. The increase will be at the global fleet level; the decrease will be on a per-ship basis.

**The Convener:** I see. So you have an obligation to reduce the emissions per ship but no obligation to reduce emissions overall.

**Robert Ashdown:** We would like to see a cap on global shipping emissions, but shipping must be allowed to trade above that cap; otherwise, you will constrain the world economy.

**The Convener:** My final question, before I hand over to Des McNulty, is to both Gordon Dewar and Robert Ashdown. Your two sectors are telling us that their contribution to the economy is so important that their emissions must be allowed to

grow in absolute terms. Food and housing are essential to life, and health services are essential to the economy. If every sector of the economy came here and told us that it understood that climate change is real, that it is human induced and that it threatens human survival, but that their sector was too important to be included within an ambitious timetable for emissions reduction, we would not have a chance, would we?

**Gordon Dewar:** I do not think that there is any conflict between what I am saying and what you are saying. We are saying that, according to current forecasts, we will increase our usage of the allowable cap, but that will happen only if other sectors reduce their usage and we can buy their share of it. If others, in all sectors, do not reduce their usage, we will not be able to buy their share and we will not be able to grow. We are saying that, within an efficient trading scheme, there should be the opportunity for that growth. However, no sector can be certain of that growth, because it relies on an overall reduction in other sectors.

**The Convener:** That still implies that, in an efficient trading system that we might have at some point in the future, every other sector of the economy will have to shrink dramatically in order to allow your two sectors to continue to increase their emissions.

**Gordon Dewar:** And they will do that only if they get a better return from their emissions trading than from the alternatives. Again, it is all predicated on there being more efficient ways of reducing carbon emissions than putting individual caps on sectors such as aviation and shipping.

**The Convener:** We note that it is heavily based on that assumption.

**Des McNulty:** I have one final question for the shipping representatives. We have heard that there is an EU emission trading scheme for aviation, which provides a preferred framework for aviation. Should there be a shipping equivalent, or should shipping be included in the EU ETS?

**Robert Ashdown:** I am glad that you asked that, because it highlights clearly the difficulties of trying to regulate this global industry at anything other than a global level. The European Parliament tasked the European Commission with including shipping in the EU ETS in 1997, but the Commission has not done that, because it understands fully that, although imposing legislation on aviation at a regional level is very difficult, doing so on shipping is twice as difficult. For 10 years, the Commission has urged and pressed the IMO to take action for it in that regard, because global regulation is much more effective and has a much bigger impact on global carbon reductions. So shipping is not in the EU ETS, but

that is changing. The Commission has indicated that it is losing patience with the IMO and has said that, unless the IMO comes up with a robust scheme by the end of 2010, the Commission will look to include shipping in the EU ETS by 2013. That is very much a second step, but if we cannot achieve the A1 approach, A2 sometimes has to do.

16:45

**Des McNulty:** On that A2 approach, and leaving aside the global versus regional issue, is the aviation mechanism appropriate for shipping?

**Robert Ashdown:** No. The specifics would be different.

**Des McNulty:** How would they be different?

**Robert Ashdown:** The issue of free allocation is trickier for ships. The aviation industry has tried to work with the World Trade Organization on policy levers and on a series of bilateral negotiations with countries that have flights to the EU. It is not possible to do something similar for shipping, because a ship may make five or six port calls in different countries, so arrangements for shipping would have to be different. Because ships might not buy bunker fuels, that aspect would be different, too. Further, with the prospect of hubs being established outside Europe, for example in north Africa, any EU ETS for shipping would have to ensure that it did not create an incentive for such hubs to grow because, technically, they would require only short final journeys from north Africa into the EU, rather than journeys from, say, Asia into the EU. A range of areas therefore require specific policy mechanisms to ensure that carbon leakage does not occur.

**Gordon Wilmsmeier:** I agree. If an EU ETS makes sense, it will have to be related to the freight flow from origin to destination. A good example of shipping finding its way around regional regulation arises from the United States cabotage law that does not allow ships sailing under flags other than the US flag to carry cargo along the US coast. The port of the Bahamas has grown a great deal because of that. It is on the doorstep of the US, so containers are brought to the Bahamas to be picked up for the last leg to the US on US-flagged ships.

So hub strategies are important, and a global approach is needed. It is important to bring within the global scope countries such as Panama and Liberia that flag ships but have not signed many agreements. The question is how we get such countries to accept our concerns about CO<sub>2</sub> emissions and get them on board.

**The Convener:** Are there any final questions for the panel? Do the witnesses want to make any

final points that have not been raised in questioning?

**Robert Ashdown:** We recognise the problems and we want to do more. We are working hard to deliver a global open-trading scheme that can work for the international shipping industry and take account of countries that have not signed up to international schemes. We think that it is possible to do that, but it is proving challenging. However, we are committed to working towards that aim with the Scottish Government, the United Kingdom Government, Europe and the IMO.

**Gordon Wilmsmeier:** We would like to see a Scottish perspective on local shipping and an incentive for that in the bill, because it has been left out so far.

**The Convener:** That is a useful observation. Thank you for your time in answering questions. We will suspend briefly for a comfort break and a changeover of witnesses.

16:49

*Meeting suspended.*

16:54

*On resuming—*

**The Convener:** I welcome panel three. I apologise to the witnesses because we are running a wee bit late and the committee's numbers are a bit depleted, but we hope that we can explore the issues in depth with you. I welcome Paul Tetlaw, the chair of Transform Scotland; Jeff Gazzard, co-ordinator of the GreenSkies campaign; and John Lauder, national director for Scotland at Sustrans.

I invite you to say some brief introductory words and give us your initial view of the bill from a transport perspective.

**John Lauder (Sustrans):** Sustrans is a charity that campaigns on sustainable transport, particularly active travel. We work closely with the Scottish Government to deliver projects throughout Scotland.

Our initial view of the bill is that we are pleased that it has been produced and with the target, but we were a little bit surprised that walking and cycling, which are forms of active travel, are seen as only small measures. We think that they could be significant in helping to reduce carbon emissions. We do not think that the bill emphasises transport as much as it could. Perhaps we can explore that.

**Paul Tetlaw (Transform Scotland):** We, too, welcome the bill and the ambition in Scotland for Scotland to be a leader in tackling climate change.

We have made only four recommendations to enhance the bill.

First, the bill must set annual emissions reduction targets of at least 3 per cent from 2010.

Secondly, the bill should include international shipping and aviation. I listened to the evidence that the committee has just heard on that, and would like to comment on it.

Thirdly, the bill should establish a duty on all public bodies to reduce emissions in line with the national targets. We certainly do not believe that it is right that politicians at a national level should shoulder all the responsibility. Things cannot be done in that way. There needs to be a cascade.

Fourthly, the bill should include mechanisms for enforcing emissions reduction targets. I have a water industry background, so I am familiar with all the improvements in water quality and waste water quality that have been brought about over the years. Those improvements have been helped by firm regulation and the work of enforcement bodies such as the Scottish Environment Protection Agency and the drinking water inspectorate. I am familiar with how the processes have worked.

As I said, I listened to the evidence that has already been given. I have a “Blue Peter” home-made model with me that shows where we are now with emissions and where we need to get to by 2050 with an 80 per cent reduction. The strategic transport projects review tells us that emissions from road transport in Scotland will increase by 10 per cent to 2022. I am afraid that if we listen to the special pleadings from certain sectors in transport and there is business as usual, all of our emissions and more will be taken up by transport alone. Therefore, emissions in every other area of society will have to be sacrificed so that there can be business as usual in transport. That is clearly untenable.

**The Convener:** Thank you very much. I am sure that we will explore in our questions issues to do with the targets and how different sectors will perform.

**Jeff Gazzard (GreenSkies):** The Aviation Environment Federation, which is a very small body—there are four of us—is the only non-governmental organisation anywhere in the world that works exclusively on aviation. We are proud of that.

I am not the kind of guy who often uses the word “innovative”, but I would say that the bill is innovative and ambitious. I was amazed to hear that BAA was not able to say how much it makes from car parking. I will let you know about that.

We have had a good look at the bill and tried to put aviation in a Scottish context. There is a

Scotland, UK and European Union hierarchy when it comes to such issues. We have come up with just four brief recommendations, which are contained in our paper. I will not bore members by explaining them.

There are complicated issues to do with the science of climate change and radiative forcing and equally complex policy issues, such as the design and content of the European emissions trading scheme and the inclusion of aviation in that, but the simple fact that we want to bring to your attention is that Scotland needs to know what its aviation emissions are before it can even begin to get a grip on them.

Facts and figures and our four recommendations are encapsulated in our comments on the bill. It is important that the step of introducing the bill has been taken. We look forward to answering members’ questions.

**The Convener:** The UK Committee on Climate Change, which is not as pessimistic as Paul Tetlaw—or perhaps it is—estimates that the surface transport modes throughout the UK could reduce CO<sub>2</sub> emissions by between 5 million tonnes and 32 million tonnes. Do you endorse those figures? Why is the range so broad?

17:00

**John Lauder:** The variety of possible figures is really interesting. Before I came to the meeting, I looked at some estimates that the Department for Transport has made for the UK. It has estimated that if every large town and city in the UK ran an individualised travel marketing programme—essentially a soft measure like the travelsmart programme that Sustrans runs, in which we sit down with households, assess their transport needs and consider how to reduce their individual car trips by walking, cycling and taking public transport—14.2 million tonnes of carbon emissions could be saved by 2015. That figure is for the UK. We could make a wild estimate and say that, at 10 per cent of that, Scotland could save 1.42 million tonnes. However, we will not do that; we will go with what the DFT said. In light of that, it seems to me that 32 million tonnes might be conservative.

I think that Scotland is aiming at a reduction of 14.02 million tonnes. That suggests to me that leaving walking and cycling as peripheral issues—saying that they are small things that we might or might not do once in a while if the weather is nice—rather than bringing them into the bill and really investing in them means that we are missing a big opportunity to make a fairly easy emissions reduction by using programmes that are already well established, well researched and up and running in various places.

**The Convener:** Are there any other views on the projected reductions?

**Paul Tetlaw:** The range is interestingly wide and not terribly ambitious. As I tried to illustrate with my crude “Blue Peter” model, it is unacceptable for transport not to play its part, which it has not been doing. It has been going in the wrong direction: between 1990 and 2006, transport emissions rose by more than 14 per cent in Scotland, whereas overall emissions fell by 12.3 per cent, which means that non-transport emissions fell by much more. All other sectors are contributing, but transport is not.

There is no single simple measure. The range of figures that you gave indicates that a series of different measures needs to be used for transport to contribute. John Lauder spoke well about what walking and cycling can do. We need a huge change in our planning and land-use policies. Cascading responsibility to local authorities will focus their minds on ensuring that the housing developments that they construct and allow to be constructed in future reduce people’s need to travel rather than increase it, as many have done in the past. Modal shift to more sustainable and more efficient modes of transport—such as rail and bus—is also important.

The breadth of the figures illustrates the range of initiatives that need to be taken. We have no choice but to take them. We owe it to future generations—our children and grandchildren—to do that. We must get away from the idea that taking those measures will be difficult and punishing, because people will welcome many of them. They will welcome living in much more sustainable communities in which they do not have to travel so far because facilities are closer at hand.

I also share John Lauder’s view that the targets are not terribly ambitious.

**The Convener:** The question largely concerned surface-based transport. Does Jeff Gazzard have anything to add?

**Jeff Gazzard:** The debate is framed by policy measures that, as my two colleagues said, stem from basic mathematics. If we cannot agree on the figures, how will we ever agree about the policy measures? This is not algebraic logarithmic equations or mathematics meeting physics; it is simple addition and percentages, which even I can do.

Once again, we have set out figures for aviation in Scotland. We have taken apart the DFT’s forecasting and shown how it has lost millions of tonnes of CO<sub>2</sub>. We have tried to put that in a Scottish context, and our second recommendation measures all that. There cannot be a wide range; we have to agree on the current scale of Scottish

emissions and be realistic about what they might be in 2020, 2030, 2040 and 2050, and that will give us a set of figures.

We are very good at special pleading, too. I have a small anecdote, if you will bear with me for one minute. I recently met a lot of environmental colleagues who are based in Brussels. One of our sister organisations there does not have enough passes, so it is, in effect, us. They were discussing whether lobbyists should be registered, and saying that industry lobbyists should be registered. I said that we should all be registered too because we are all industry lobbyists, but we are just a different industry. That put the cat among the pigeons, I can tell you.

There is special pleading on all sides, but my special pleading is to say that we should forget the policy issues and our children and the future, because we know all about that; we need to know about the mathematics of climate change. The bill’s target is 14.02 million tonnes of CO<sub>2</sub> equivalent by 2050. You cannot fit all that in; you have to make some tough choices, but you have to understand the maths of where the sectors contribute. It could be the cement manufacturers or the power generators, or the wide range of non-governmental organisations. Honestly, if there is one thing that my 17 years of working on this has shown me, it is that we have to do the maths. If you cannot understand the maths, you might as well go home and not bother.

**The Convener:** I have another question about walking and cycling in particular. John Lauder expressed some surprise—or disappointment—that the bill does not do more on active travel. I can take it as read that you think that there is scope for legislation to achieve more active travel. How should it be achieved? Should there be targets for public transport or active travel? Would it be more appropriate to think of mechanisms to create financial incentives as other witnesses have argued, to ensure that people have clearer reasons for making those different choices?

**John Lauder:** Both of those ideas could be applied. We could learn something from other northern European countries. The Scandinavian countries have already done a lot of the work that I think we should start to do in Scotland. They did not set targets for modal share—Denmark, for example, did not say that it was going to have a 15 per cent modal share in 20 years’ time; rather, the Danes looked at why people do not walk and cycle and began to tackle those reasons through a range of interventions. They built paths, for example, and reallocated road space. They built that into their planning frameworks and they enforced it fairly rigorously. For example, they reduced the amount of car parking in city centres every year. They did it quietly, but they did it and they set targets for it.

The Danes also ran campaigns about soft measures to give people more of an idea of the benefits to them as citizens of walking and cycling. They showed the health and financial benefits. They also worked with businesses. They used a raft of measures, and we could learn and incorporate what they have done already.

It is dangerous to set ambitious targets straight away because we could set ourselves up to fail, but it is also important to make definite plans. The Government has started to look at individual towns and how they might have networks through the smarter choices, smarter places initiative, and that is welcome. It is applying some of what has been learned in England and on the continent, but it is doing it in a small way.

A lot of evidence for how we can go about creating the switch to modal share already exists. It is about winning hearts and minds as much as about building things. The good news on this front is that the cost benefit ratio is very good. The study that Rod Eddington did for the DfT in 2006 showed that there is a lot of benefit in investing in these soft measures and encouraging people to walk and cycle.

When I read the draft bill I was surprised that the Government did not seize on the short trips that we make, particularly by car. I am not isolating the car, but about 50 per cent of road trips by car are less than five miles. I was surprised that the Government did not seize on that in the bill and say, "Great—that's an easy hit. Let's make a big investment here and let's get people walking and cycling for those short trips, which will obviously reduce carbon emissions and improve public health, which also has a big benefit in a cost benefit analysis." I was surprised that that did not feature in the bill, because we could do what the Danes, Norwegians and Swedes have already done—give ourselves an easy hit straight away.

**The Convener:** Did those countries take a legislative approach that needs to be taken in the bill, or are you asking for a more strategic approach and a change to Government transport strategy?

**John Lauder:** A change in strategy at all levels of government is required—it is required at national level but it must be cascaded down.

Scotland already has the legislation. For example, when you read Scottish planning policy 17, you would think that everyone in Scotland is walking or cycling for short trips. The legislation is in place, but it seems to drop through the cracks and we do not enforce it. I think that it is about taking a strategic approach.

**The Convener:** I put the same question to Paul Tetlaw: given the aspiration that everyone, across the political spectrum, is signing up to, does there

need to be a clearer emphasis on emissions reduction in the Government's transport strategy?

**Paul Tetlaw:** Yes. To build on what John Lauder said, there needs to be a national framework. Whether it is part of the STPR or national planning framework 2 does not matter; nationally, we must set a framework that states that this is where we are going with policy and cascades that down to local authorities. We have examined the matter quite closely and our understanding is that the other countries to which John Lauder refers—the Scandinavian countries and so on—set a national framework; it was part of a national plan that all parties would buy into over the long term. Emissions reduction is not a contentious issue like road pricing and so on; I cannot see that people would get upset about it—people would welcome it. We need a framework to drive it forward. At a national level we must grasp the bull by the horns, and whether it is part of NPF 2 or STPR does not really matter.

I will also respond to the question that you asked John Lauder about other measures. It is clear that over the years the cost of public transport—buses and trains—has gone up in real terms, while the cost of motoring, and indeed flying, has come down. It is not tenable, if we want to achieve the modal shift that I think we all recognise we need to achieve, to allow that gap to continue to widen. Although I accept that it is a more difficult issue to tackle, we have to tackle demand management on the roads and other forms of surface transport. Most cars are driven about with only one person in them—the driver—at peak times, whereas other modes of transport, such as buses and trains, are full and people stand on them. That is an inefficient use of our infrastructure and we have the wrong price signals. Whether it is done through the pricing mechanism or high-occupancy vehicle lanes does not really matter, but we must start to shift the balance and it must be done nationally.

**The Convener:** I will bring in other members; I am sure that other points can be built into other questions.

**Shirley-Anne Somerville:** I ask you all for your thoughts on the 2050 target and the interim target. How ambitious are they? Would you like to see any changes?

**John Lauder:** We are perfectly happy with the target, although we would be happier if it included aviation and shipping. The important thing is the interim target, on which we feel we could make some progress quite quickly.

17:15

**Shirley-Anne Somerville:** Would you like the interim target to be changed?

**John Lauder:** No, we are happy with it.

**Paul Tetlaw:** In my written submission, I mentioned a 3 per cent annual emission reduction target, which would allow for better interim targets along the way. As long as we have that target in place, we will hit a trajectory. There are a lot of graphs flying around in the WWF Scotland paper—I am not sure whether it has been submitted to you, but I found it very helpful in demonstrating the sort of trajectory that could be achieved with a 3 per cent target. With that target in place, we will hit the interim targets and the end point that we need to achieve. Scientists are questioning whether that end point is good enough or whether it needs to be tougher, but we have to start somewhere.

**Jeff Gazzard:** There is not a problem with realising that the target should include aviation and shipping emissions—however imperfect some of the measurement systems might be, they still exist. Bunker fuels are reported only as memo items in an arcane situation in which both aviation and shipping emissions are dealt with by their respective trade bodies. The organisations are trade bodies, despite the fact that they have the initials “UN” in front of their names—the fact that the IMO and the United Nations International Civil Aviation Organisation are dealing with the issue is akin to having the drug companies run the World Health Organization. That is not a throwaway line.

Once again, this is about mathematics—that is my theme for the day. The interim targets and the reduction percentages, and the target of 14.02 million tonnes by 2050 are fine. We came across the background paper on the bill, “Technical Note: Climate Change (Scotland) Bill: Greenhouse gas (GHG) Emissions, Annual Reductions and Targets”, which includes aviation and shipping emissions in its 1990 starting point. Logic tells me, therefore, that those should be included at every step along the way. What to do about it is a different kettle of fish, but that is a pretty good document, and the figures should be included.

On the question of bunker fuels in aviation, an old colleague of ours, Peter Lockley—who left to work for WWF—is the sole non-governmental organisation representative at the IMO. I will ask him to send you a couple of pages about shipping emissions, so that you are fully informed on that, because there are things that can be done.

**Shirley-Anne Somerville:** We will come to international aviation and shipping later—I will ask some further questions on the targets. Paul Tetlaw has given his view already, but I ask the other witnesses for their views on the annual targets.

The policy memorandum states:

“Prior to 2020, the Scottish Ministers will be expected to set annual targets which build towards delivering emissions reductions of at least 3% each year.”

How well placed is Scotland's transport system to meet that ambition? Are you happy with the targets in the policy memorandum? Perhaps John Lauder would like to start.

**John Lauder:** It would be great to have 3 per cent year on year. As to how well placed transport is to deliver that, in the immediate aftermath of the strategic transport projects review I struggle to see how transport will manage to make those cuts. There is heavy investment in road transport, which accounts for 95 per cent of all transport emissions, and which—as Paul Tetlaw said—will only grow. I do not think that it can be done—transport cannot reduce its emissions if there is such an investment in petrol-based and oil-based travel.

**Shirley-Anne Somerville:** I am sorry—I should have asked how you think transport is placed to achieve the emissions reductions that you hope for in an annual target.

**Paul Tetlaw:** Are you asking about internal surface-based transport within Scotland?

**Shirley-Anne Somerville:** We will start with that.

**Paul Tetlaw:** It is not well placed—the strategic transport projects review projects that emissions from road transport will increase by 10 per cent to 2022, which is not a good starting point.

The idea of a long-term transport plan is good and many aspects of the strategic transport projects review are good and welcome. The methodology is good and I welcome all the work on rail electrification. However, of the long list of 29 projects in the review, some need to be prioritised and developed earlier, whereas some are untenable in the context of the discussion that we are having—alternatives to them need to be considered. Without a priority list in the review document, we are in difficulty.

**Shirley-Anne Somerville:** Does aviation have any chance of contributing to a reduction in emissions in the short term?

**Jeff Gazzard:** No—it just does not. We have only to look at the figures to see that. My head spun when I analysed the scale of what Scotland's aviation emissions could be. Members might not believe me, but the Department for Transport's UK-wide figures, from which Scotland's figures come, lost millions of tonnes of CO<sub>2</sub> when they were recast between 2006 and 2007. That is a big issue.

We heard from Alice Bows and—a little grudgingly—from Mr Dewar that growth overtakes technology. There is no doubt that the aircraft that are being delivered now—the Boeing 787 and the Airbus A380—are a technological tour de force, but a Boeing 787's fuel capacity, one tankload, is equivalent to 1.2 million miles of motoring. Such

aircraft are not environmentally benign. They are more efficient and represent tremendous technology, but growth outpaces the best technological improvement rates. The growth rate is 3 to 4 per cent, whereas the best technological improvement rate is 1 to 2 per cent, so the problem continues.

**Shirley-Anne Somerville:** Regardless of the type of transport, does Scotland have the skill base to move to a low-carbon transport system and take advantage of the opportunities that will arise when we change our transport systems?

**Paul Tetlaw:** Absolutely. Why not? Scotland has a great history of innovation. I have no reason to believe that Scotland does not have people who can be equally successful in the new era by innovating in the required ways. We heard a lot from earlier witnesses about the importance of the economy. If Scotland developed appropriate technologies and took a lead, that could be a great boost to the economy. Others would come here to benefit from that, which would have an economic value.

May I comment on aviation?

**Shirley-Anne Somerville:** Certainly.

**Paul Tetlaw:** I heard what you heard—what I describe as special pleading about the fundamental importance to the Scottish economy of aviation, which means that it cannot possibly contribute to achieving the targets, but there are many types of aviation. People have talked about rail travel replacing air travel. There are a huge number of internal flights. Most people accept the argument for rail travel—I know that the business sector accepts it because I am a member of a group of which the Confederation of British Industry Scotland and the chambers of commerce are also members, and it is heavily promoting high-speed rail links to the south. I am sure that business understands that an alternative will have to be presented and that internal aviation will not continue at existing levels. That is one area in which aviation emissions could be reduced.

I do not question essential business journeys by air, but I question the value of some other air journeys. For example, a good friend of mine—I will not say the name—went to Spain last weekend for a hen weekend that lasted four days. I am sure that the committee does not want to know the details, but far too much alcohol was consumed and I do not think that the group did any good to the reputation of Scotland or England—English people were also there. The people returned very much the worse for wear and I do not think that they were productive at work for a couple of days after returning. I am sure that members are all familiar with such trips. I question whether they are essential to the economy—in

fact, they damage the economy and Scotland's reputation. Much flying is for such purposes.

**Shirley-Anne Somerville:** I will pick up on your comments about leisure travel. How could the Government and Parliament change that behaviour and tell people that they cannot go on holiday?

**Paul Tetlaw:** Pricing mechanisms are the simple answer. The only reason why that hen party went on that trip was because it was so cheap to fly to Spain for the weekend. Jeff Gazzard can tell you much more than I can about air travel and whether it pays the true price of its impact on the environment. However, I think that pricing mechanisms could soon change the situation and prices will rise due to oil scarcity, if not through other means. The vision of ever-expanding airports and ever-growing numbers of air passengers is a fantasy.

**John Lauder:** You asked about the skills base. As Paul Tetlaw said, the skills base is definitely there. It is interesting to note that many of the big consulting engineering firms are interested in active travel and see it as a growth area. They are very imaginative and come up with great ideas all the time.

There is a lot of good legislation out there anyway. Before I came here today, I conducted a little test to see what was available and I found that, over the past six years, there has been a lot of good legislation, good reports and good recommendations, and there is more to come this year. There is no shortage of good ideas. What is lacking is governmental effort to bring it all together and fund it adequately.

**Shirley-Anne Somerville:** I am sorry to go on about leisure travel, but I represent the Lothians, and Edinburgh bases much of its tourism on short breaks. People might be worried that we are trying to stop them travelling, which would discourage people from coming here, as well. How do we deal with those concerns, which are based on the contribution that tourism—including the leisure weekends that you think are inappropriate—makes to the capital and other parts of Scotland?

**Jeff Gazzard:** I am not sure that you can sit here and say that such trips are appropriate. In a way, they are a bit of an easy target. The fact is that the website of the Scottish Government's version of the UK Government's act on CO<sub>2</sub> campaign gives advice on how people can cut their CO<sub>2</sub> emissions. It advises people to holiday at home, avoid flying, use videoconferencing, take the train and so on. The Scottish Government's advice differs slightly from the UK Government's campaign in that it suggests that people should buy offsets if they fly, whereas the UK Government says, basically, "You can buy offsets

as a last resort, but they do not make much difference."

Over the past few years, we have offshored much of our basic service industry. However, in the past 25 years, we have offshored our personal tourism. I do not want to stop people travelling or even—if they think it is really necessary—going to Malaga for a hen night. However, as Paul Tetlaw said, people only do that because it is cheap to do so. If they paid the cost of the environmental damage that their journey causes, they would not do it—they would do their vomiting in an alley off the Royal Mile instead.

**Shirley-Anne Somerville:** Unfortunately.

**Jeff Gazzard:** Indeed. However, your Government tells people to holiday at home. I love coming to Scotland, because it is one of the few places where I get on with my colleagues—you can understand why. I think it is great that I can get to Scotland by train. Scotland is a nation in Europe and people like Scotland. People like fiercely independent countries. Get out there and talk to other European nations about your policy. Appoint a Scottish climate change ambassador—I do not care who you choose; perhaps Al Gore might discover that he has long-forgotten Scottish links. There is a lot that you can do to adapt your policy and sell it to other people in a way that enables you to work with them.

17:30

**The Convener:** Cathy Peattie would like to ask a quick supplementary, and so would I.

**Cathy Peattie:** I will not go into the visit to Spain.

Jeff Gazzard talked about the Scottish Government's website and the wisdom there. I agree with that, but I suggest that people who go to Spain—in fact, most people who get short flights to wherever—have not read that advice, which might seem to them like something that somebody else should do, or something that does not affect them. I speak to people who say, "That's a daft idea. What are you involved in climate change for?" As you can imagine, they use worse words than "daft". How do we get beyond that? We can offer good advice on all sorts of things, but how do we get people to take it?

**Jeff Gazzard:** It is a question of compulsion, regulation, exhortation and education. One of the most fantastic things that I have seen happening recently is walking buses, where kids walk to school as a group. That comes up every couple of years. A car manufacturer usually gives them fluorescent jerseys and stuff like that.

My colleagues on the panel are the experts on the easy, cheap hits in relation to public transport

and personal responsibility. I work at the other end, which is expensive. I consider what we need to do in high-tech demand management. You have a broad spectrum of witnesses, and none of us does the work for the sake of our health.

I have worked in marketing and advertising for most of my commercial career—or, as my mum so delicately puts it, since the last time I had a proper job. It is possible to develop communication campaigns that grab people's imagination and shift their views—I will e-mail links to a couple of examples. However, once again, hitting people through the web, Scottish newspapers, Scottish television and the Government's own information campaigns is very cost effective per head of the population. It is cheap to do. I will be the climate change ambassador. I do not mind.

**The Convener:** I will follow that up with a quick question for Paul Tetlaw. You said that you are part of a group that promotes high-speed rail and that the CBI, the chambers of commerce and so on are involved and signed up to that agenda. To what extent do those business voices see the business case for bringing some of the tourism and leisure industries back to Scotland so that we benefit from them here, rather than our facilitating the continual offshoring of those industries?

**Paul Tetlaw:** I have not had that conversation with them, so on that basis I cannot comment, but I am sure that they understand, as we do, that it would be beneficial if the amount of money that goes out of the country was turned around and spent here instead.

**The Convener:** Whether people spent the money on colourful hen nights or drunken weekends in Edinburgh or on something that is more benign, they would be spending that money in Scotland.

**Paul Tetlaw:** There is also a huge market just south of the border. At the moment, many people tend to go the other way. It would help if we could get a volume of them coming our way. I observe that there are a lot of English people in Edinburgh at the moment, and have been throughout the winter. I think a lot of them have come by train because the rail companies are marketing their services quite heavily. There is a big market to aim for there.

**John Lauder:** My comment is almost an anecdote. Every year, we run a conference for school travel co-ordinators, and in the past two years the best speakers were 17-year-olds. Those two sixth-year pupils from different schools absolutely understood the position. Their view was, "Of course I'm going to go abroad with my pals. I know that cheap flying is going to end pretty soon."

Sustrans has been working in schools for a few years now. I am not saying that it is because of us, but the curriculum is informing the kids. My view is that the public know far more than the politicians who agonise about the matter think. The public know that cheap flying is coming to an end.

**Shirley-Anne Somerville:** One of the witnesses mentioned the Government technical note that is attached to the bill. What do the witnesses think about the emission tracks that the Government suggests? Do you think that the emission changes are being made quickly enough?

**John Lauder:** Are you asking whether the emissions targets are being made quickly enough?

**Shirley-Anne Somerville:** Are we seeing the trajectory go down as quickly as you would like? Would you like to see cuts being made earlier?

**John Lauder:** Yes. We want to see action.

**Shirley-Anne Somerville:** You surprise me. What changes would you like to see?

**John Lauder:** As Paul Tetlaw said, we cannot beat the Government, because everyone has a responsibility. I have been trying to work out how targets will filter down. Paul Tetlaw also mentioned local government. I cannot see how the targets will filter down to local government through, for example, the single outcome agreements. We completely support those agreements; they are working on the ground in some instances, but not universally. I am sorry if I have gone off the topic of the question, but you pretty much knew the answer I was going to give.

**Shirley-Anne Somerville:** It is nice to have it on the record.

**John Lauder:** It is more about how the targets will filter down. The way the framework has been set up means that it is not just about the Government setting targets. It is setting indicators and outcomes, but it is up to local authorities to reach agreement with the Government through the single outcome agreements. It is about how 3 per cent year-on-year cuts in carbon can be negotiated on that basis.

**Paul Tetlaw:** The less we do now, the more we will leave to be done in the future and the worse we make it for the future. You have probably heard that it is all about the area under the curve. The sooner we start the better. It is easier to start now, because there are lots of soft targets—everything we have been talking about that is not that difficult to shift.

In transport and travel terms, we are doing a lot of the wrong things. If we just gave better signals to people and produced better legislation, people would shift quite quickly to doing the right things.

We really should start now—hence our request to the committee that a 3 per cent annual target should come in straight away.

**Jeff Gazzard:** I echo that.

I have a quick comment to make about targets and what to do about flying. If the aviation industry can deliver only 1 to 2 per cent improvements a year, that is its growth. Demand could be managed down through taxation at 5.4p per passenger kilometre, to be introduced over three to five years. About three years ago, we had access to the Department for Transport's passenger allocation model and HM Treasury's gross domestic product model—we did not break in; they let us have the information. If you put such taxes on tickets, you will halve the rate of growth. Industries world wide would kill for a guaranteed 1 to 2 per cent growth rate a year. That would give you the chance to stabilise emissions. If you are dealing in percentages, you would say, "Here are the policies. Here's how to take CO<sub>2</sub> out. Here's the structure that underpins the bill."

You have a top-down approach—most of the people who have given evidence today are in the middle or somewhere near the bottom, but the absolutely right thing to do is to start at the top. The point that Cathy Peattie made is absolutely right: you have to educate people. You could almost go around and knock on everybody's door—members could take 10 people each at the weekend. I think that the target of 14.02 million tonnes is achievable by 2050. The trajectories are fine. Scotland, in the political sense, is taking all this very seriously, which is good news.

**Shirley-Anne Somerville:** Should the bill have sectoral emissions targets for transport?

**Paul Tetlaw:** Yes, it should.

**Shirley-Anne Somerville:** That was nice and easy.

**Paul Tetlaw:** If it does not, there will be special pleading around transport and we will not be able to do anything about it. That would just not be realistic.

**John Lauder:** I agree with Paul Tetlaw. My concern is that the view could be taken that, in order to grow the economy, we must drive a cart and horses through any targets that we set for transport—that transport must be taken out of those targets. I feel that that is what we heard from the previous witnesses. That goes right to the root of what we measure and what we regard as economic growth. However, I do not want to open up that debate this afternoon.

**The Convener:** Somebody had to make a joke about driving a horse and cart at some point.

**Jeff Gazzard:** It is always the Greens.

What you are doing is clever and sophisticated in terms of policy development—all credit to the UK Government and the Scottish Executive. It is a top-down approach that sets out where you want to go. Afterwards, you can have all the arguments, discussions and differences of opinion about what we need to do and how we can get there. Usually, we have all those discussions first, which go nowhere because we are discussing them without a target. That is why the bill is fundamental. We have a road map—a much-abused term—and a trajectory, some figures and some mathematics. We can have the arguments later. Yes, it is difficult. There are educational issues and some people will be intractable—mostly those who float on oceans and fly through the air.

I am a deeply sardonic and pessimistic person—I am not always this happy—but I love it when reasonable questions are asked by reasonable people and reasonable answers are given. That was not what I heard from the previous witnesses—apart from Alice Bows, who is lovely.

**Shirley-Anne Somerville:** I have a final question on targets. Do you have an opinion on the measurement and reporting of emissions that are generated anywhere as a result of goods and services that are used in Scotland?

**Paul Tetlaw:** Yes, I do—if I have understood your question correctly.

**Shirley-Anne Somerville:** It is about overall consumption and the Scottish economy.

**Paul Tetlaw:** It should be in terms of where it is produced, as well. One reason why our emissions have gone down over the years, while transport emissions have continued to go up, is that we have exported our manufacturing industry. Let us not kid ourselves that we have done anything other than that. It is naive to believe that we can continue to allow China or whoever else to take the hit for those emissions when they are produced in the manufacture of products that we import. It is only a matter of time before it is accepted that each country must take responsibility for the products that it imports. That will change the whole picture for shipping and so on, because there will not be the same volume of shipping around the world. Once a carbon budget has been created for a country's own goods, market forces will intervene and people will realise that it makes much more sense to produce those goods at home than to transport them halfway around the world.

I take issue with what one of the earlier witnesses said. He said that it is predominantly more carbon efficient to transport goods around the world. I just do not believe that. Produce that is grown locally in season surely must be better. As for heating tomatoes in polythene tunnels in Kent

or wherever, there are all sorts of waste-heat schemes that could be used for that. Instead of being lost, that heat could be used to grow local produce. Therefore, I simply disagree with what I heard about that.

**Shirley-Anne Somerville:** I think I disagree, as well.

**John Lauder:** Quite a bit of work could be done to measure the costs and benefits of reducing carbon emissions. We regularly try to sell our ideas to the public, but that is a lot easier to do when we can produce facts and figures that people can understand. Where we struggle at the moment is in measurement and monitoring. The Government could invest in that research to help us to understand the benefits to individuals of reducing carbon emissions. We struggle for figures on that.

**The Convener:** Aviation and shipping—particularly aviation—tend to get singled out for attention in the climate change agenda, sometimes by me but also by high-profile direct action activists and by a number of people who have debated the UK bill. The previous panel of witnesses might argue that the aviation sector should be allowed to continue to increase its emissions. The flip side of that is to ask why we should single it out for special attention.

17:45

**Jeff Gazzard:** Simply because it is kerosene all the way.

I agreed with Mr Dewar on one point. He said that by 2050 aviation emissions are likely to be about 5 per cent of the global total, but that is under the scenario of complete carbon business as usual in the IPCC's "Special Report on Emissions Scenarios"—the relevant graph, in colour, happens to be in our submission. It indicates emissions of 2.5 billion tonnes by 2050, which is an awful lot of carbon given that the total figure is supposed to be between 10 and 20 gigatonnes.

In the UK, we are fortunate to have had a focus on air travel simply because we are a fairly air travel-intensive country. We use a lot of low-cost air travel and have had major airport developments since 1995, such as the second runway at Manchester, so the issue has been flavour of the month. As members know, I run a European alliance. If you speak to people about the new Athens airport, people linked to Charles de Gaulle airport or our NGO colleagues, such as the Sierra Club, the Natural Resources Defense Council and the Environmental Defense Fund in the United States, you find that everyone is concerned about the issue. That is why aviation is emphasised.

In a way, aviation is an easy target, as many people fly and make the connection between their business and leisure trips and what comes out of the engines of the planes that they use—it is a no-brainer. We lobby effectively but we cannot generate stories: the media will print only things that are of interest. The Environmental Audit Committee of the Westminster Parliament and the Transport, Infrastructure and Climate Change Committee of the Scottish Parliament seek facts only about issues that stick out to them like a sore thumb. That is the problem.

We are told that other industries can reduce their emissions, but aviation is more or less kerosene dependent: as emissions from elsewhere come down, its emissions go up. The figures that we have produced for Scotland seem to intersect. That is why the issue gets the attention that it deserves. However, we have a carbon-intensive lifestyle and, if the truth be told, issues such as coal and road transport are just as important as aviation. We must pay rigorous attention to them all.

**The Convener:** Would you like to respond to the argument that we heard from the previous panel of witnesses, who claimed that aviation's contribution to the economy is such that it is legitimate to argue that, within an efficient and tightly-capped trading system, it can be allowed to continue to grow, with the rest of the economy taking up the slack?

**Jeff Gizzard:** The contribution of aviation to GDP is important. Historically, aviation has grown at about twice the rate of GDP. It facilitates the movement of people and certain goods around the world, and the further it goes the more efficient it is. We cannot turn the clock back, but aviation does not pay its costs. If it did, we reckon that we could stabilise emissions at today's level.

In late December, the Parliamentary Office of Science and Technology at Westminster produced a stunning report—which I will send to the committee—that took apart the DFT's cost benefit analysis for expanding Heathrow. The way that climate change impacts, economic benefits and job creation ratios are calculated is phenomenal. It is estimated that 1,000 jobs—direct, indirect and induced—are created at the airport and off site per million passengers. If you are Mr Dewar, you employ a car park attendant at Edinburgh and a paper boy is created in Aberdeen. If the ratios were accurate, we would be housing aircraft workers on the dark side of the moon, because that would be the only space left.

The volume of work that is always quoted by the industry and the DFT is a report by Oxford Economic Forecasting Ltd. We have taken that apart in a report by our consultants, CE Delft, who are pretty well respected. I am conscious of the time, so I will send the committee a short note on

those findings. Aviation contributes to the economy and is worth having, but only at the rate that we suggest, because it does not pay its external costs. If we were to factor into the cost of air travel some of the social costs of carbon identified in the Stern report, we would probably not fly at all, although I am not suggesting that.

The DFT, in all its financial meanderings to justify the expansion of air transport, assumes a very low cost of carbon based on the amazing assumption that we have hit our 2050 targets. That is what it says—if you are stunned at that, so am I. The DFT assumes that its policies will work and it will hit its target, so we need only a low cost of carbon. I kid you not.

**The Convener:** You have mentioned some of the aviation emissions figures, and in a previous meeting the committee discussed the national atmospheric emissions inventory as a source for those figures. How robust is that source of emissions data?

**Jeff Gizzard:** It is as robust as you will get. As we say on page 3 of our written submission, the latest NAEI figure is that there were 1.122 million tonnes of CO<sub>2</sub> emissions from international flights from Scotland in 2006. That is not so far from the 2005 DFT figure for all domestic and international flights, which was 1.5 million tonnes.

These things can be forecast and measured reasonably accurately, although two or three years ago the DFT suddenly decided that there will be no growth in aviation in the UK beyond 2030. I find that amazing, because there will be growth everywhere else in the world. That allows the DFT to get rid of those tonnes of CO<sub>2</sub>. Does that answer your question?

**The Convener:** Yes.

**Jeff Gizzard:** Forecasts from the DFT, the Civil Aviation Authority and the NAEI are about as good as you will get, but Scotland needs to conduct a study into what its own figures are now and what they will be in future.

**The Convener:** That is useful, thank you.

I have one more question for the whole panel on international credits as a means of reaching or purporting to reach domestic emissions reduction targets. The Scottish Government does not intend to prescribe a limit on the use of international credits for that purpose. Are there any views on whether a limit is desirable?

**Jeff Gizzard:** There should be a limit. The UK Government is establishing a limit—I have picked my words very carefully—and so, I believe, is the EU within its 2 degrees policy.

Incidentally, it is our clear understanding from the environment commissioner Stavros Dimas that

the EU 2 degrees policy of which Scotland is, in effect, a subset will include aviation and shipping emissions in its targets.

All international credits should be limited.

**The Convener:** Would you support a proposal for an 80:20 split, for example, so that no more than 20 per cent of the domestic target should be reached through those measures?

**Jeff Gazzard:** I think that that is a lot, but it is about as good as you will get, and it is fair enough. We have spent the past five years working on having aviation included in the ETS because it was the only policy option open to us. Do not believe that we are fans of emissions trading as a concept to save the planet.

**The Convener:** Are there any other views on international credits?

**Paul Tetlaw:** I support the 20 per cent figure that has been proposed. A limit is needed.

**Cathy Peattie:** I want to consider the role of advisory functions, reporting duties, public organisations and so on. What advantages or disadvantages do you see in the UK Committee on Climate Change providing advice to the Scottish ministers?

**Paul Tetlaw:** There is probably a short-term advantage in that the UKCCC has been created and is up and running, but in the longer term it would be better to have a body that is appropriate to and for Scotland.

**John Lauder:** I agree completely.

**Cathy Peattie:** That was my next question. Is the idea of a Scottish commission on climate change positive and helpful in the longer term? In a sense, that is what you have just said.

**Paul Tetlaw:** Yes, it is because it will take account of particularly Scottish circumstances.

**Jeff Gazzard:** The UKCCC has been very clever because it has rigorously distanced itself from NGOs, industry and special interest groups in its initial 18-month period. The committee has, in the immortal phrase, formed its own views, which was a smart thing to do. Scotland should have an equivalent commission, but it would need to work closely with the UKCCC. The way that it writes its reports and what it says seem okay to me.

**Cathy Peattie:** So some kind of relationship between the two organisations and parallel working would make sense so that they did not go in different directions.

**Jeff Gazzard:** Yes. As I said, Scotland may have only 5.1 million people, but you are very important. The Executive and the Parliament do a cracking job; every time I have been here, I have

been impressed. We are in Europe and you are part of the UK. At all those pinch points, there are policies and institutions that you need to engage with pretty quickly and thoroughly.

**Cathy Peattie:** Is the reporting mechanism in the bill robust enough? If not, how can it be improved? Will the bill deliver flexible adaptation options for the transport sector?

**Paul Tetlaw:** I mentioned the water industry as an example of a sector in which regulation is clearly in the hands of particular bodies. One of our recommendations is that simply reporting on progress is not sufficient and that we need enforcement to ensure that we achieve the targets we set ourselves. Most of my career was in the water industry. We have brought about tremendous improvements in drinking water and waste water quality as a result of clear legislation and bodies that are tasked with enforcing it. The Scottish Environment Protection Agency, which deals with waste water, and the drinking water quality regulator for Scotland have worked successfully with the industry, and society has benefited.

**John Lauder:** We need to ensure that we have the right mix of people and that they have sufficient enforcement powers and independence.

**Cathy Peattie:** I am interested in hearing more about the benefit of placing a duty on local authorities to tackle climate change and to report annually on their transport emissions, as well as on their other work on climate change.

**John Lauder:** That is vital. The point that I explored earlier was whether the single outcome agreement framework will allow local authorities to opt out or change their approach. Some local authorities are already enthusiastic, but others are not. The idea of enforcement seems to go against the idea of single outcome agreements, and it will be interesting to see how targets are enforced—if they can be.

**Cathy Peattie:** Local authorities have public duties in issues such as equality and biodiversity.

**John Lauder:** Yes—a public duty is required.

**Jeff Gazzard:** I have a small point on that. The situation here is analogous with that in the US if we view local authorities as states—we have the good, the bad and the ugly. As we discussed, there are good local councils that can be green beacons and can be encouraged. We should start where we know we will get successes, whatever they may be, to provide a model. Just off the top of my head, we could have town twinning for carbon reduction measures. We have had a lot of input on air transport issues in the US, and we have worked with local authorities and regional bodies such as the air quality management group for the

north-east states. In such groups, there are environmental protection officers, councillors, people from education authorities and others who can take many of the actions that have been mentioned. We need to consider what local authorities can do. On whether the approach should be voluntary or advisory, I suggest advisory. That is a good way forward.

**Paul Tetlaw:** The point is wider—public bodies generally should have a responsibility—but local authorities are key, given the activities that go on in their areas. I referred to the importance of land use planning and the type of developments that we permit in future. A duty would focus the minds of local authorities on the type of developments that they allow in their areas.

Let us be honest: there has been competition between local authorities as regards where people live and what type of housing is allowed, which has led to longer-distance commuting. Local authorities must have a mechanism that makes them think about the implications of allowing housing developments to go ahead. They need to realise that allowing a housing development to proceed might lead to much more transport activity, which would mean that transport activity in another area would have to be cut if there was a target to meet. Having such a mechanism would focus the minds of local authorities.

18:00

**Cathy Peattie:** For many of the past 20 years, if not longer, I found that, although everyone thought that equality was an extremely good idea, only one officer or department had the responsibility for dealing with it. The creation of a public sector duty on equalities has meant that statutory organisations have had to take on the responsibility across the board. Do you not think that imposing a climate change duty would help us to get away from the idea that one department is wonderful and another is awful and that one council is good whereas another is awful? Such a duty would not be prescriptive but would work across councils.

**Jeff Gazzard:** That is a good point. For example, all local authorities are big users of travel. In the final few weeks before Ken Livingstone lost the mayoral election, the Greater London Authority put through a policy on air travel whereby, if a journey in Europe takes up to eight hours from door to door, it must be made by rail. Flying within the UK is not allowed—videoconferencing must be used.

Our organisation also has a travel policy, because we have international advocacy responsibilities. We have cut our flights, and I have made train journeys that are among some of

the most convoluted in the history of the railways. Getting to Verona from Manchester by train is not easy, but that is how we must do things.

Bodies such as HM Revenue and Customs say on their websites that their staff will not fly around the UK but use videoconferencing. Even Phil Woolas, one of our middle-ranking environment ministers, did not fly to Australia; he held a videoconference instead. That must become the norm, and public sector institutions are the places in which to implement such policies.

**The Convener:** As there are no final questions for the panel, I ask the witnesses whether there are any outstanding issues that they intended to raise with the committee but which did not come up during questioning.

**Jeff Gazzard:** The Scottish Executive should have some policies on whether to use air travel when travelling around the UK. Some of the Scottish islands are a bit peripheral, and I will not argue against the public service obligations that are in place. There are PSOs for Polish politicians to fly from Warsaw to Strasbourg, which does not represent a good use of air travel, but I accept that the air services to the Scottish islands are vital. They should be a little more expensive than they are, but PSOs have a role to play in peripherality.

A final point on peripherality is that I do not buy the argument that Scotland is very peripheral in Europe, especially if one goes to the other end of Europe and sees how peripheral the countries there are.

**The Convener:** I appreciate your point about the island links. If Rob Gibson had been at today's meeting, I am sure that that issue would have come up earlier.

Does John Lauder have anything to add?

**John Lauder:** This might sound like special pleading, but it definitely is not. I would like the committee to take account of paragraph 8.1 of the consultation document, which classes walking or cycling instead of using the car as a small change. A big opportunity is being missed: the issue should be mentioned in the bill, just as forestry—which has its own section—is.

**The Convener:** Thank you very much. I appreciate the time that you have spent with us. I know that our meeting has overrun quite badly, and I put on record my appreciation to the staff who have supported us in continuing the meeting so late. I thank everyone for their time.

*Meeting closed at 18:04.*



Members who would like a printed copy of the *Official Report* to be forwarded to them should give notice at the Document Supply Centre.

No proofs of the *Official Report* can be supplied. Members who want to suggest corrections for the archive edition should mark them clearly in the daily edition, and send it to the Official Report, Scottish Parliament, Edinburgh EH99 1SP. Suggested corrections in any other form cannot be accepted.

The deadline for corrections to this edition is:

**Friday 20 February 2009**

#### PRICES AND SUBSCRIPTION RATES

##### OFFICIAL REPORT daily editions

*Single copies: £5.00*

*Meetings of the Parliament annual subscriptions: £350.00*

The archive edition of the *Official Report* of meetings of the Parliament, written answers and public meetings of committees will be published on CD-ROM.

##### WRITTEN ANSWERS TO PARLIAMENTARY QUESTIONS weekly compilation

*Single copies: £3.75*

*Annual subscriptions: £150.00*

Standing orders will be accepted at Document Supply.

Published in Edinburgh by RR Donnelley and available from:

#### **Blackwell's Bookshop**

**53 South Bridge  
Edinburgh EH1 1YS  
0131 622 8222**

**Blackwell's Bookshops:**  
243-244 High Holborn  
London WC1 7DZ  
Tel 020 7831 9501

All trade orders for Scottish Parliament documents should be placed through Blackwell's Edinburgh.

**Blackwell's Scottish Parliament Documentation**  
Helpline may be able to assist with additional information on publications of or about the Scottish Parliament, their availability and cost:

**Telephone orders and inquiries**  
**0131 622 8283 or**  
**0131 622 8258**

**Fax orders**  
**0131 557 8149**

**E-mail orders**  
**business.edinburgh@blackwell.co.uk**

**Subscriptions & Standing Orders**  
**business.edinburgh@blackwell.co.uk**

#### **Scottish Parliament**

**RNID Typetalk calls welcome on**  
**18001 0131 348 5000**  
**Textphone 0845 270 0152**

sp.info@scottish.parliament.uk

All documents are available on the Scottish Parliament website at:

www.scottish.parliament.uk

**Accredited Agents**  
(see Yellow Pages)

and through good booksellers