

PUBLICATIONS & RECORDS

UNCORRECTED TRANSCRIPT OF ORAL EVIDENCE To be published as HC 900-iii

House of COMMONS

MINUTES OF EVIDENCE

TAKEN BEFORE

Environmental audit committee

personal carbon allowances

Tuesday 24 July 2007

MR MATT PRESCOTT, DR TINA FAWCETT and PROFESSOR PAUL EKINS

Evidence heard in Public Questions 161 - 221

Oral Evidence

Taken before the Environmental Audit Committee on Tuesday 24 July 2007

<< EXCERPT >>

Members present:

Mr Tim Yeo, in the Chair; Mark Caton; Colin Challen; Mark Lazarowicz; Jo Swinson; Joan Walley.

Memorandum submitted by RSA CarbonLimited

Examination of Witness

Witness: Mr Matt Prescott, Project Director, RSA CarbonLimited, gave evidence.

Q161 Chairman: Good morning. Thank you for coming in. I understand you have just published your interim report for the CarbonLimited project. Would you like to say a little bit more about what the project involves and what your findings have been so far.

Mr Prescott: We have not quite published our interim report. It is due at the end of the month, but obviously much of that information is now pretty much prepared. The project has been running for 18 months and will run for another 18 months, specifically looking at personal carbon trading. During that first 18-month period we have focused on a number of the big academic questions behind the idea. We have focused on issues to do with economic efficiency and impact, et cetera. We have done some initial work on the technological infrastructure and some of the IT systems that we could use. We have looked at some of the privacy issues that have been popular in discussions. We have also had a preliminary set of conversations with a number of publics, moving forward with switching into more of a conversational mode with the population, to start to tease out some of the public acceptability issues in more detail, and also moving into a more practical phase where we are testing some of our ideas on the ground and visiting communities to explore how some of these can manifest themselves.

Q162 Mr Caton: Thank you, Chairman. In your submission, you are particularly enthusiastic about the role the private sector can play, both in administering the system and providing the impetus for keeping it running at a useful pace. What exactly do you envisage the private sector undertaking in a personal carbon trading scheme and why are they better suited to do it?

Mr Prescott: We are quite salient about which parts of the economy kick into action in order to support such a scheme and the private sector is one which has a lot of the existing infrastructures that one might need to support the kind of user interfaces that we would envisage. For example, if we were looking at the idea of carrying around a personal carbon credit card, then naturally some of the banks already have existing credit card infrastructure and local knowledge about how those could work and be set up and are very experienced at dealing with some of the issues around fraud and gaining of market-places. Certainly, if one were to take the banking sector as an example, there is a lot that is already in place that they might be able to do but the issue for us is to take a step back and look at what is required. For many people in the UK a bank style approach to a personal carbon trading scheme might not be all that appropriate, so we are also looking at what the public sector could do to support such a system as well. We very much see a mixed portfolio of options and we very much want to explore each of those. As I have mentioned, one of the things we have already done is that we have looked at the IT infrastructure which naturally does lead us into some of the banking sector organisations particularly.

Q163 Mr Caton: Could you expand a little bit on the balance between the role of the Government and the private sector? In doing so, do you think there could be a problem of credibility with the public if they felt that the scheme was actually owned by the private sector?

Mr Prescott: The most important message that we would wish to communicate about the idea of a personal carbon allocation and a tradeable one is that the ownership rests with the individual. That is the most important point about the whole idea because, with an ownership at the level of the individual, you are, if you like, reversing the hierarchy of responsibility. By taking responsibility for a share of the UK's emissions reduction target and having those emissions rights in their hand, the people of the UK could then choose how to move forward with those and appoint those credits to any of the systems that might be on offer, any of the traders or any of the organisations offering to operate the scheme or whatever. The first and most important thing is that it is owned by the individual. The second thing is that the types of organisations that would operate the scheme would be those best suited to do so, subject to the government guidelines, but the government guidelines we feel should be as light as possible so that the system is not seen as a government one but as a shared ownership scheme, if you like, between civil society, business and government. Therefore, as I mentioned, the types of organisations that might choose to act to offer services to individuals to operate their accounts could be in the private sector, such as

banks, but they could also be in the public sector, such as, for example, a housing association, which might choose to gather credits together on behalf of their residents in order to invest those in longer term energy security gains, such as local renewable energy schemes, for example, which the residents would choose to sign up to in order to give them a longer term energy security signal, and then the market-place itself would be interacted with via the housing association rather than by the individuals, but at the choice of those individuals, who may, for obvious reasons, in many cases not necessarily have strong financial skills or a strong interest in playing into the market-based environment. The interface with the individual would be one of choice but the ownership would very much rest with themselves.

Q164 Colin Challen: I should start my questions by mentioning that I am a member of the RSA and have been slightly involved in the project, in its early days. You have touched on the technology side. Of course there has been the debate about whether or not everybody should be issued with a card. Some see that as the introduction of some sort of ID card, with civil liberty problems attached to it. Do you think it would be necessary for everybody to have a card, like an Oyster card, or could you manage the system and the transactions on the system without necessarily having to have a card of the credit card type?

Mr Prescott: I think the interface is very important. The ultimate purpose of the scheme is to bring about behavioural changes at individual and community scale, I think it would be fair to say, and, therefore, the visibility of the scheme needs to be high - and necessarily so, because, as we see it, we have upstream carbon instruments in play of which the public are not especially aware and which do view more as a tax, in feel. The purpose of the scheme is very much to give ownership down to the level of the individual and the community and enable them to control it, hence the interface would need to be something that was comprehensive for the scheme but also comprehensible from the point of view of individuals. The original suggestion of a stand-alone credit card, of sorts, which has been talked about for probably the last 12 months would give you that "in the wallet" visibility that you are involved in a scheme. However, we have looked into that particular approach and the retailers to whom we have spoken are not particularly keen, due to extra time at checkouts, extra staffing and educational requirements, and potential lost revenue under a voluntary scheme rather than a mandatory scheme. The alternative would be to piggyback on existing card technologies, if one were to follow that route. The main options that stand up for us are the loyalty cards and the pre-paid cards that are starting to emerge. It would be possible, depending on the coverage of the transactions, to gather much of the data that you need from one of those existing infrastructures, and those are popular with the retailers when one talks about this idea with

them but also would mean there would be very little in the way of additional infrastructure cost to set up the scheme. It would entirely be done at the back end, behind the scenes, and nothing to do with point of sale, software changes, et cetera. That is the more popular route. Many people do have loyalty cards and the coverage of those is quite broad and the understanding of those is quite high. However, it is obvious to see that domestic household utility bills are not often paid using one of the existing card systems but more often either through a prepaid meter or direct debit and hence we would be looking at a mixture (a) of technologies and (b) of interfaces that we would want to tie in in an understandable way, such that the scheme looked neat and tidy to the public but actually properly did dovetail a number of different infrastructures in order to deliver that.

Q165 Colin Challen: Have you had discussions with credit card companies and are they in any way enthusiastic about it or do they have any objections to it?

Mr Prescott: Yes, we are talking to a range of organisations operating the system. They are generally reticent to talk about introducing new technologies which will cost time at the point of sale but they are generally very positive about reusing their existing infrastructure to support such a scheme because they can see that, once introduced, if introduced, there could be some business opportunities for them and some alternative uses for networks into which they have already put time and effort.

Q166 Jo Swinson: I should start off by saying I am signed up to the RSA website that tells you how much carbon you have been using. I heard about the project and thought it was quite interesting. It sends me an email every so often with what today's carbon price would be. It is a very interesting project you are involved in. I was interested to look at the variety of methods you have to try to assess the public acceptability of the scheme. In your memorandum, you mention citizens' forums, Carbon Limited Cities, and so on. What are the results so far of what you think the public reaction would be to personal carbon trading and where do you think more work is needed?

Mr Prescott: The citizens' forums which we are calling Carbon Limited Cities have not actually been launched yet, unfortunately. That will kick off around about September of this year and run for a while. We will be using market segmentation approaches to test quite accurately - this is probably the Energy Saving Trust's market segmentation that we use - and to look at some of the key questions about this idea in detail with the public and be able to put some very solid research forward with respect to public attitudes. For the moment, as I mention in

my introduction, it is quite anecdotal the evidence that we would have because it is not based on any particular segmentation. We do find that people will naturally take the core idea for the personal carbon trading scheme (that you receive a personal carbon allocation that is tradeable, et cetera) and will apply it to themselves and will immediately respond if they feel they might be on the losing side, if you like. The issues that tend to get raised repeatedly are to do with the availability of public transport (which is generally a rural/urban issue, to put it crudely); to do with local climate (some people feel that parts of the UK, if one were to apply a UK-wide scheme, might be requiring additional units, carbon credits); and the other main area of interest is around children. All of these touch on the vital question of the equity or the perceived equity of the scheme. In their Domestic Tradeable Quota paper, the Tyndall Centre talks about an equal per capita allocation. Many people feel that is inherently fair and many others feel that is inherently unfair because of their circumstances. We feel it is very important indeed to separate between people who are able to make choices to reduce their carbon emissions from their lifestyle and those who are not. An obvious and good example of somebody with a lower carbon footprint would be somebody in a multi-occupancy household with a general low carbon lifestyle versus somebody in a single occupancy household, but the single occupancy household might be an individual who has chosen to live on their own and is able and has the means to, or it might be somebody who through no fault of their own finds themselves living alone, and we do feel it would be important to be able to distinguish between those two groups. That same example can ratchet out around other sections of society and hence we are doing work to look at specific case studies and to look at what kind of mechanisms you might need to use to support people who are disadvantaged by the scheme in such a way. The fuel poverty question, if I might touch on this, is a big one in this respect, in that those people who are fuel poor generally have high carbon emissions from their households. Obviously that is not a showstopper because, in essence, the scheme is redistributive. However, it does mean that we need to make a choice about which way to avoid that disadvantage. For us, there are three ways which we go into in more detail. One is to increase the allocations to those households, which would then mean we were moving away from the per capita allocation. Another would be to adjust other benefits to that household, perhaps through the social services network or wherever, in order to avoid the disadvantage using related schemes targeting household energy efficiency, like Warm Front. Thirdly, one could exempt those households from the scheme and adjust the cap accordingly. Once we look into the case studies of individuals under the scheme, we will find those at a disadvantage through no fault of their own, and we just need to explore how we can avoid that disadvantage.

Q167 Jo Swinson: As well as creating a complex scheme that might be fair, it is also about it being perceived to be fair.

Mr Prescott: That is right.

Q168 Jo Swinson: This is surely where the whole thing can fall apart, if the public do not accept it. I am thinking of recent public reaction to alternate weekly collections or to road user charging. When radical changes are perceived to affect people, even if it is for the environmental good, very often there is not the support out there. The people who have been engaged in this so far have tended to be people who are quite interested in the issue, environmentally conscious people. How do we make it work for the vast majority of people out there? Some of the opposition will come from people who will lose out, disadvantaged groups, but some of the opposition will surely come from people who just want to keep a high carbon lifestyle and do not like the thought of being asked to change or pay for it. How would you propose that we can increase our public acceptability?

Mr Prescott: There are a number of issues in that question and it touches on different sections of society as well. Firstly, our philosophy in running this project is very much one of co-production - and I hesitate to use that word - in so far as we want to work with the population to explore the detailed issues and describe an instrument that will work for the maximum number of people, with public buy-in through that process so that we can demonstrate that we have consulted very much during design phase rather than at the end of the design phase. That is important for us in the way we are approaching the project. It is quite right to say that interested groups will always take part in a voluntary scheme first. We accept that. The introduction of the voluntary scheme which we are planning to bring about during the course of this project will naturally attract these types of groups initially, but we can nonetheless still achieve a certain level of learning from that, certainly in terms of infrastructure provision in ease of use and generating a big debate. That is a useful step. The next step beyond the voluntary scheme for us is what one might call an "incentivised voluntary scheme". This touches back on parts of the role of the private sector where one could imagine, for example through a CSR budget or through some other identified funds, that a private sector organisation wishing to operate the scheme could offer an incentive to voluntary participants in the form of financial reward or some other reward in kind, and hence you would then start to attract a slightly wider demographic of people. The private sector have shown an appetite for marketing environmental issues so far. If we can harness that appetite to market a cap and trade scheme, then one could see development of some very

interesting project proposals from the private sector to individuals, with incentives, which might well attract a far greater body of the population. It is from that point that then the conversation about its acceptability at the mandatory stage could take place. There were more questions in there which I do not think I quite got to.

Q169 Jo Swinson: There is the issue of disadvantage, because they live in a cold climate or far away from public transport, which will create opposition. But, in relation to opposition from people who are just resistant to change in their lifestyle or paying more for their current lifestyle, how do we go about getting them aboard schemes like this?

Mr Prescott: Firstly, this debate is premised on the need to cut emissions rapidly, hence it is more a question of which tool or which mixture of tools we employ. Under a personal carbon trading scheme, if one were in receipt of one's personal carbon allocation but chose not to participate in the scheme, then, at the point at which they made the purchases relevant to the personal carbon allocation, they would be paying some form of surcharge in order to obtain those credits from the market and hence it would feel like a tax. That is the straight choice. You either take control of your personal carbon allocations and either employ somebody or choose to operate in the market yourself and use that process to enable you to make the relevant choices for you about how to live a lower carbon lifestyle or you accept that you will be taxed. I think it would not be a problem once there is a strong enough conversation and a strong enough participation to incentivise a voluntary scheme for that debate to be had in public.

Q170 Chairman: What makes you think that personal carbon trading will result in community action?

Mr Prescott: We do not assume that it will but we are looking at how it could. We have a particular programme of work that is initially taking the Cardiff South and Penarth constituency as a case study. We are looking at a variety of housing types and a variety of demographic groups within that constituency, first of all to explore what would be the most efficient carbon reductions at either household or community scale, and, secondly, what community based groups or community based organisations - and I mentioned housing associations but it could be the local government even - chooses or would be able to offer support to those households that wanted to do something on a larger scale and a community scale for reasons of common sense; that is, a greater carbon reduction can be achieved at the community scale, for example. That may be true in many cases, hence that population choose to invest in their

carbon credits in that way to bring about, as I said, a longer term energy security gain for themselves. We do not know that is how people will behave but we want to establish what the options could be for individuals and play those out in communities around the UK to put some evidence on the back of that question which is whether or not people would choose to behave like that.

Q171 Chairman: Would you envisage people pooling their allowances if they were living in a block of flats?

Mr Prescott: It may very well be the best choice, if the household were paying a communal energy bill. I have worked on a housing estate where people, because they were having community energy tariff flat, chose to have both the heating turned up full and their windows open, because that was the atmosphere they most enjoyed in their flat. There was not any economically rational reason why they should not do that but also, because the flat was not one that they owned, they did not necessarily have any incentive, for example, to install insulation or whatever. One would extend that also to private sector managed accommodation. Again, any investment on the part of the tenant, the gains from that would not be felt by the tenant but by the landlords. There are some particular issues around housing that need to be explored and the idea of pooling credits or personal carbon allowances to act at community scale might very well be, by some distance, the most obvious choice for somebody in that kind of accommodation.

Q172 Chairman: How big could the unit be for people working together? Have you thought about that?

Mr Prescott: It is a good question that we will explore in Cardiff. For argument's sake, a particular block of flats could be a community or a housing estate could be represented as a community. I would suspect that smaller sizes might work better - up to two or three houses in a street or of that kind of scale - but we shall see the output of our work in Cardiff.

Q173 Mr Caton: Your technical requirements working paper mentioned the possibility of including an expiry date for credits. Why would this be necessary? What sort of eligibility period are we talking about?

Mr Prescott: That paper was exploring some of the market based issues as well as those associated with the technical infrastructure. One of the suggestions came from one of our

expert workshops. When we were discussing the Oyster card scheme as an analogy, we were concerned that if people felt that the value of carbon would rise rapidly over time then as carbon becomes scarcer they might choose to hoard their carbon credits, hold on to them, and hence you might see a market failure in respect of trading early on. That was where the suggestion for a time expiry came from. However, our thinking has probably moved a little bit further. We now see perhaps the regularity of the allocation as being the most important thing and with respect to the question of maintaining a fluid market-place. So we would be thinking more on a monthly basis for an allocation, which would chime with many people's monthly income. Many people budget over a monthly period of time financially, and hence budgeting over a monthly period in terms of the carbon would also be a logical time frame and may provide the fluidity required without the need for a time expiry. But if we look at a cap and trade market such as the EUTS, there are some interesting relationships between EUA credits, between years and tradeability. All of these issues would need to be set out, and we will do so in an interim report, in order to explore how best to maintain the fluid market. It would also be important not to allow the prices to vary, to fluctuate too rapidly, because I think that would cause people a lot of problems.

Q174 Mr Caton: I hear what you say about the danger of hoarding, and that being important, the expiry date, but I guess the counter danger is that if you have an expiry date people spend and therefore emit more just because they know that is going to happen. Is that part of your reason for moving to monthly accounting periods rather than an expiry date?

Mr Prescott: Possibly yes. The predicted price of carbon - and this is something again that we are exploring but unfortunately at the present time I cannot report it - would really determine whether that kind of behaviour would be likely. I certainly know of people - and I shall not name names - who are taking long-haul flights this year for summer holidays because they perceive that some kind of carbon reduction scheme is on the horizon and they want to get it in while they can. Yes, I am sure that kind of behaviour would be possible, and, again, it is all to do with detailed scheme design to avoid any unwanted repercussions of such a detail.

Q175 Jo Swinson: I wanted to ask how you see the personal carbon allowances fitting in with the rest of the equality tools that we have in this area, including the emissions trading scheme. Do you think they would interact well or would we have to start with a clean slate to introduce personal carbon trading?

Mr Prescott: It would be unfeasible to start with a clean slate because we do not have one: we have the Kyoto mechanism, the EUTS, the Renewables Obligation, Climate Change Agreement, etc. But we do see multiple carbon instruments on the same energy chain, so it is possible to suggest that it is not a problem at all for the idea of personal carbon trading that a number of these instruments exist and that they can overlap. Indeed, with the EEC 3 moving into a slightly more visible location, if you like, I think there is a certain level of recognition that upstream instruments are not able to bring about the climate behaviour changes downstream that are necessary and so a multiple number of instruments on that line would be entirely possible. Also, as I mentioned, the nature of the personal carbon allocation being something which is very much yours to own as an individual, it will feel different from a number of those other instruments that I mentioned which do come through in perceived terms as taxation. That would be my first point. The second would be that, so long as the carbon market that was set up to support a personal carbon trading scheme was a separate currency from the EUAs of the ETS and the EUTS, then the two schemes would be able to operate side by side. They may want to be connected but we would suggest that a personal carbon trading scheme should only apply to individuals in the population. It would need some kind of safety valve but it should not be able to be gained by other organisations, who would behave in different ways from individuals, and hence we very much see personal carbon trading as the personal element of what the Tyndall Centre described as the "domestic tradeable quota" and, indeed, it need not be part of a domestic tradeable quota. In fact, a domestic tradeable quota would imply a clean slate, but, because that is not possible, we have reached the conclusion that a domestic tradeable quota also is not possible. Therefore, from the personal carbon trading scheme we are looking at a percentage of the emissions reductions required by a nation being allocated to the individuals and those then forming, if you like, a shared responsibility with government and business for achieving the reduction. It would be possible to put that in place initially as an initiative (that is, as a voluntary scheme) and later as a mandatory market-place without running into problems with the other instruments that currently exist.

Q176 Mr Caton: In this inquiry so far we have heard strongly varying opinions on the value of pilot schemes. What sort of pilots are going to be part of the carbon energy programme and what information are you going to get from them?

Mr Prescott: Primarily, two. The first is one on which we are currently working with a private sector organisation called ATOS Origin who are helping us to look at each of the infrastructural options for operating the scheme and to start testing those out. In terms of piloting the technology, if you like, that is entirely possible and we will initially be doing

that with an unrepresentative sample, just to look at ironing out some of the details of what would most likely be a card, and then looking at getting a representative sample of the population to take part in that pilot scheme. That is a technology pilot that is entirely possible to do. However, that will not give firm evidence regarding the behavioural response in the round, and hence our programme for Carbon Limited Cities, using delivery to fora to look at behavioural response. Secondly, the development of our online Talk on CarbonDAQ, which we are currently revamping quite drastically to include a trading platform, possibly multiple trading platforms, would be set up both as a public engagement tool to come and learn about the idea but also as a research tool for us, and we will be using, again, segmentation techniques. We will enable people to set their own allocations and chose to trade in their own ways and form their own groups, et cetera, et cetera. There will be a lot of functionality but from that functionality we will be able to see which are the most popular methods that people are using and the kinds of behaviours different groups are displaying. In an online environment, even though some of those groups may well be geographically located in the UK and, indeed, overseas, as this will be an international tool, we will be able to learn a lot about behaviour in an online environment through that. Between the technical front end, if you like and the online back end, we will learn a lot, and then those two being linked together so that the carbon gap becomes the personal carbon account that supports the card that they have for part of the pilot scheme. It is that that will evolve into the voluntary scheme, so that we see a number of the elements coming together that enable a robust analysis of people's behaviour.

Q177 Mr Caton: You seem to agree with many of our other witnesses that the big question is attitudes and behaviour, and you are attempting to address that. However, it has led some of them to say that you cannot have a pilot project based on voluntary action in order to try to work out the details of a mandatory scheme, just because, as has already been mentioned, the people who get involved are already interested, whereas the majority of the public, sadly, at the moment perhaps are not. How do you respond to that?

Mr Prescott: Firstly, to reference my timeframe of moving from voluntary to incentivised voluntary to mandatory, this piloting work should at some point in the not too distant future contain an incentive part, and hence we move away from the usual suspects in environmental. However, there is a big danger that one could try to pilot something and never really uncover the key issues, which is why we are covering our bases and also doing some modelling work to support the deliberative fora. The main concern that was raised was really to do with piloting domestic tradable quotas and I think this is where the confusion arises. We are talking about

a system of personal carbon allocations that go to the population and those are tradable. The environment in which those are tradable is not a whole economy scheme, because the personal tradable units are not tradable with business or industry. Indeed, that unit of currency is not necessarily also traded by business and industry; that is where EEC and the EUTS is operating. So we are talking about a separate scheme that is focused on the individual. That, for us, is what personal carbon trading is. The main problem with piloting the DTQ is that it would be impossible to set up a whole economy trading scheme in a microcosm but, if you forget about the rest of the economy and focus on the behaviour of individuals and communities, I think we can get a lot closer to an accurate piloting system than we would if we were talking about domestic tradable quota. That is the important distinction for us.

Q178 Colin Challen: Leaving aside the question of public acceptability for a moment, do you think that by the time of the next election, say in two years time, we would have enough information of a technical nature and practical nature to support the introduction of such a scheme? Do you think that by then we may have ironed out any of the practical questions which may be raised as objections?

Mr Prescott: There are the practicalities of operating the scheme. I believe we will, by the end of 2008, be able to report fully on the practicalities of operating the scheme. This is quite a pressing issue and we are looking also to minimise risk, hence looking at reusing existing infrastructure. My feeling is that it is very much in place. We are not talking about an ID card at all. The amount of information we would need is far less than that and so the existing infrastructure networks we have will be able to support the kind of scheme we are describing here. The outstanding questions, I suppose, are around political acceptability, which to some extent I believe we have just touched on by talking about the various instruments in play, and I think unnecessary concern about double counting. If we are talking about different currency, there cannot be double counting. So political acceptability, in terms of policies, I think will be there. It is the public acceptability which is really the outstanding one and that is why we want to put into play an incentivised voluntary scheme so that there is a strong enough conversation about the idea that, at the very least, people will have heard what it is and have a good idea of what it is and many of the public should have taken part in exploring it. I do not know if that answers your question.

Q179 Colin Challen: Do you think an incentivised voluntary scheme could be put in place at the next election.

Mr Prescott: Yes.

Q180 Colin Challen: If it is publicly acceptable it does address the question of public acceptability. Obviously, if people want to volunteer, that is a self-defining group, but what then happens? What is the process after that? Do you have to wait for another generation, five years time, before you can roll it out across the nation, so to speak?

Mr Prescott: I do not think we need to worry about the political cycle to introduce an incentivised voluntary scheme. That can be done in the institutional sector, such as by ourselves. The rules governing that scheme would emerge in time. If we are talking about making a mandatory scheme, if we are talking about when we get to that point, then I very much feel that the Carbon Committee that has been identified in the Climate Change Bill would be the group to create the rule book, if you like, that governs the operation of the mandatory scheme. The mandatory scheme could still be operated by public or private sector organisations - and that is when I talked about a very thin rule book to guide it - but we would need something like OfCarb or the Bank of England to control the price of carbon in the market but it could possibly be done through secondary legislation in the first instance. I am not sure that we are necessarily overly concerned about the political cycle. We would be if we were talking about a domestic tradable quota because we would need to clear away some of these instruments.

Q181 Colin Challen: Once again on public acceptability. Has any of your research shown whether the general public, accepting that there is an environmental challenge, would be happier to do this or to prefer environmental taxation or regulation or do they have that opinion in your assessment?

Mr Prescott: I believe there is evidence emerging on that issue, but not from ourselves at the current time. That is something we will be addressing through Carbon Limited Cities over the coming months.

Chairman: Thank you very much indeed. A very helpful session.

Memorandum submitted by Environmental Change Institute

Examination of Witness

Witness: Dr Tina Fawcett, Senior Researcher, Environmental Change Institute, gave evidence.

Q182 Chairman: Good morning. Welcome. Thank you for coming in. By way of introduction, would you like to tell us about the work you are doing at ECI and with the support of the UK Energy Research Centre on this topic.

Dr Fawcett: Over the past two and a half years in the UK Energy Research Centre we have followed essentially a general set of programmes of various aspects of personal carbon allowances. We do not look at the industrial and commercial side, if you like, the full DTQ, we just focus on household energy use and flexible transport, including aviation. We have held a debate with various academics and other interested parties about taxation options, upstream cap and trade as opposed to personal carbon allowances. We held a wider debate at PSI in relation to how, if we introduce personal carbon allowances, it would affect various sectors of the economy and the effect it would have on healthcare and things like that. We have also done specific pieces of research. We have done, at the moment, still a fairly small amount of research on the issue of children versus adults and allowances and we are hoping to continue with that. We have done a bit of work on the inclusion of public transport in the early stages. We are currently finalising a report about the prospects of having a pilot study or having some sort of trials on personal carbon allowances: Is that a researchable question? What would we find out? We are also just continuing to put the idea forward and generate debate about it.

Q183 Chairman: Clearly one of the merits of personal carbon trading is that it tends to be progressive in its effect on the public rather than regressive, which most green taxes are. On the other hand, various forms of carbon taxation are pretty simple to introduce compared with the inevitable complexity of a carbon trading scheme. How do you assess the relative merits of the alternatives?

Dr Fawcett: Obviously there is the effectiveness, there is the equity, there is transaction cost and you can look at those things. Then there is also the whole question of public and

political acceptability and psychological effect of an allowance as opposed to a tax. They have been debated under all those different headings. One of the arguments between people who want to have a personal allowance and a cap is that then you have a strong cap which tells you how much the population as a whole is going to emit per year and you are going to meet that target every year, whereas with a tax you may not get the level of taxation quite right and that varies somewhat. Some people would say that is not that important, because you can move the tax around to make a bit more savings in the following year, but one of the arguments in favour of a personal carbon allowance is the certainty of the level of carbon emissions you are getting from that sector of the economy. The equity question about who is affected is very complicated. We do not have enough information at the moment to know all the answers to that. There was some initial work done by Paul Ekins and Simon Dresner - and Paul is talking to you later - which looked at the effects of personal carbon allowances and taxation on different income groups within the population and they showed that personal carbon allowances would be more progressive. In that the poorest people would be worse off than under a taxation system, even with recycling of money towards the disadvantaged, but that some people will still lose out under personal carbon allowance, some of the poorer people. But their research was necessarily based on using proxy data and did not include international air travel or any air travel because that data was not available. So, on those sorts of evidential questions of what the effect is going to be, we need some proper research. To answer the question properly, we need more data.

Q184 Colin Challen: You have already touched a little bit on the variance of the much talked about TEQs, DTQs, PCAs or whatever that the Environmental Change Institute is looking at. I am wondering how that will "interface" - a dreadful word - with organisations, commercial sector businesses and so on. Do you envisage that at some point the consumer becomes the only person who needs to trade in carbon, as it were? If you have all the embedded carbon revealed, then you could start excluding other sectors inside it one by one. Obviously that would be quite a long process and there would be quite a lot of work to be done there, but would that be your ultimate goal?

Dr Fawcett: No, I do not think you would. A possible way of going down is that you try to get the embedded product listed on every single product. Certainly a lot of the supermarkets are starting to look into this issue at the moment. For example, Walkers have a carbon label on their crisp packets and so on. In terms of practicality, that is a very long and difficult road, if you can even do it. I would see personal carbon allowance just being about direct energy use by individuals, and clearly we have to have a parallel system, DTQs or whatever, on

the other side of the economy to reduce emissions from organisations and businesses at the same time. It just so happens we are focusing our research on the personal half of the equation because, in a sense, our research background is household energy use and personal transport. That is the scheme we are looking into, but we recognise there has to be a parallel scheme for the other side of the economy.

Q185 Colin Challen: How would this fit in with, say, the European ETS, where you are dealing with the same commodity, if you like, or the same unit of energy, it depends where it is sold and where it is bought. How do you avoid double counting?

Dr Fawcett: At the moment, if you were to bring in personal carbon allowances, there would be an element of double counting because electricity use is included under EU ETS. In personal transport, obviously aviation is not included, and gas supply is not included. So you would have a small amount of double counting at the moment. I am not entirely clear in my own mind how important that is. I certainly do not think it should be a barrier to us trying to further develop the idea of personal carbon allowances, particularly as we know EU ETS, although it might have a great deal of potential, is not actually effective in reducing carbon emissions at the moment. I recognise it is an issue. I do not think it is a reason to say this idea cannot go forward.

Q186 Colin Challen: It moves into the territory of where the price of carbon is set. We have seen a great deal of volatility in the European market for carbon, which we may not want to see. We certainly would not want to see that, I guess, in the personal market. There has to be a relationship between the credits in both markets for it to work effectively.

Dr Fawcett: That is right. The strength of researching DTQs is one thing, because you are very clear that across the whole economy there would be one price of carbon. I must admit it is not something on which we have done a lot of research. We have more tried to focus on the effect of PCAs on householders and the businesses that provide them with energy services. I cannot give you a good answer at the moment about how you would integrate the two market prices but, you are right, you would not want two very different carbon markets operating, because that would give you a lot of unnecessary complication.

Q187 Jo Swinson: You have mentioned public transport. In your memorandum you said that it should be included but there were a lot of difficulties in doing so at the initial stages of

the scheme. Can you envisage public transport being included as a feasible component of the scheme? If so, when?

Dr Fawcett: Yes, I think we could. We would say, for simplicity, that you might leave it out initially, simply because it massively increases the number of transactions. If you have to have some sort of transaction each time you get on a bus, that is a lot more complicated. Most people pay for their energy use monthly and perhaps fill up their car once a week or whatever, so it is a very small number of transactions, essentially, that you have to manage in one system. Obviously in London now things have gone electronic, with the Oyster card and so on, so clearly there is a capability for having sophisticated systems on buses. We have just gone thorough chip-and-pin going into the tiniest retailers, so it is possible to roll out these technologies to a local level. I would imagine, if you wanted to start to include public transport, that it is going to be easiest to start with long-distance rail travel, the higher carbon trips essentially, and gradually move it down to small, local, low carbon trips. You may decide, in the end, that those are one per cent of people's personal carbon emissions and frankly it is just not worth the cost of trying to include those in the scheme.

Q188 Jo Swinson: Could the problem be got around by involving the bus and rail companies in the scheme, so that the cost of the carbon credit was effectively built into the price of the ticket and then the companies themselves have to purchase ----

Dr Fawcett: If you imagine the whole economy-wide scheme and you are not including public transport within people's personal carbon allowance, then, somehow, those businesses which were running the buses or whatever would have to buy their carbon on the carbon market or be allocated it - however you run that side of the economy - so that, effectively, whatever price they are paying for carbon will trickle down to the customer. It is indirect carbon taxation, in a way, by the time it hits the passenger.

Q189 Mr Caton: We have already touched on how personal carbon trading schemes might interact with ETS. What about other policy initiatives, like the Renewables Obligation, Energy Efficiency Commitment, Life Change Levy. Could they fit with PCAs, or would we need to wipe the slate clean and rely on PCAs?

Dr Fawcett: We very much see PCAs as simply an umbrella policy within which all the other policies we already have and more would work. Our research background comes out of energy efficiency, particularly household energy use. We know that people have been using energy a

lot more efficiently within their homes for the past 30 years and yet energy consumption has gone up - because there has been no cap, because we have warmer homes, because we all have more tellies, because we live in smaller household groups. It is for all those reasons. It is not that energy efficiency cannot deliver some things, but without some form of cap on demand there are always going to be more energy services out there that you can buy. We became interested in the idea of a personal carbon allowance as a sort of capping scheme because we know about efficiency, which is a very powerful policy, that even it cannot deliver the savings that we need. It is not working. If you look particularly at personal transport or aviation, the situation is even worse in terms of massively increasing demand despite new technologies that are making things more efficient in low carbon fuels. We see very much see this as the top level policy, beneath which you continue doing all the things you are doing now but more, because we are trying to move quickly to a lower carbon society and you need to give people and institutions and organisations every possible help to get there, to make it publicly acceptable. Unless you have policies supporting A++ efficiency-rated fridges in the shops, so people can buy the low carbon option, unless you have policies making cars the less favoured transport option and supporting public transport and low travel lifestyles, the personal carbon allowance policy is not going to work. It has to be within a landscape of policies that are helping the whole of society, infrastructure and individuals, move towards lower carbon options.

Q190 Colin Challen: The level of public acceptability for the scheme was introduced and might be measured by the number of people simply passive in the market who do not want to do anything with it. The system could, I take it, survive with quite a large degree of passivity, but at what point would that become damaging to the scheme?

Dr Fawcett: Do you mean if people did not trade.

Q191 Colin Challen: Did not pay attention to the scheme and just ignored it.

Dr Fawcett: The only people who could do that would be people who were below their allowance level. If you have gone above your allowance level, you are going to have to buy some additional carbon. To pay your energy bill you are going to need to buy some extra carbon, whoever sells it to you, whether it is an energy company, the bank or whatever.

Q192 Colin Challen: They would see that simply as a tax, would they not?

Dr Fawcett: Possibly they would. It is a charge reflecting the impact you are having on the environment. That is right. From what we know so far, under personal carbon allowances there are going to be more winners than losers. In other words, there are going to be quite a lot more people under allowance than there are going to be people over allowance. Particularly in transport, there are a lot of emissions concentrated in the top ten or 20 per cent of the population. The people who are doing the most travelling are responsible for a lot more emissions than the bottom ten per cent of the population. All those people who are under the emissions allowance - maybe it is 60 per cent of the population, we do not know what that number is - have something they could sell, they have these spare allowances. Maybe some people are not bothered about that but most people are reasonably switched on about money and values, and this is, if you like, another kind of currency. Those people have a strong incentive to do something - to sell it, if it is easy for them, or to save it - and the people who are above allowance, if they want to continue with their high carbon lifestyles simply have to buy extra carbon - so they had better hope somebody is selling - otherwise they will not be allowed to fill up their car at the pump.

Q193 Colin Challen: Do you think there is a danger point, as it were, if most people tend to ignore it and dispute it as yet another cost and so on? In terms of the practical management of the scheme, are there any tipping points where you have to say, "Look it has not operated properly" where it was a bit complicated technically, perhaps, and you might just want to say, "We tried and we failed."

Dr Fawcett: I suppose if it was brought in and people were really against it, you might have some campaign of civil disobedience or whatever. It might all fall apart but the same thing would be true of direct carbon taxation. That has been extremely politically unpopular and that is the main competitor idea to personal carbon allowances. This idea of society not going along with the process of getting to a lower carbon world means there is the danger that whichever policy mechanism you try to use people will reject it. One of our jobs is to help people understand that this is what we have to do as a society. However we get there, we have to make these big changes.

Q194 Mark Lazarowicz: Is there not a danger for example in terms of people wanting to fill up their cars and use up all their carbon allowances sampling the black market. £20 to the guy in the petrol station and you will top up without points taken on your carbon card. To avoid that kind of situation you will have to have a complicated system of controls and regulations to ensure that a black market does not develop by the side of the official market.

Dr Fawcett: Of course in any system you would expect to get a bit of fraud and people getting round the rules, however you do it. Controls on fossil fuels are fairly tight and very well known in the economy. The government statistics are about how many billion litres of oil are sold a year and which companies are doing what. The chances of a big black market emerging are very small because these are commodities that are extremely tightly controlled and there are very good information systems about them. I do not see that as a major problem. I do not see how a petrol company would get away with it.

Mark Lazarowicz: There is quite a problem in the agricultural sector, but I will leave it there.

Q195 Jo Swinson: Most of the proposals for personal carbon trading suggest an equal per capita allocation amongst adults but obviously there are different circumstances, those based in the country, the number of your house and you mentioned whether or not children are included as well. What do you think is the best way to do this? Do you think there is a case for varying the allocation or should it be equal for every adult?

Dr Fawcett: I think it should be equal for every adult. I do not see practically how you can do it any other way. It delivers equity in a certain way. It is one definition of equity that everybody gets the same. It is not the definition of equity that says everybody has to make the same changes to their lifestyle. Everybody getting the same allowance, even with trading, is not going to hit some people differently from others. That is fairly inevitable. There might be some very minor exceptions with disabled people or people with particular medical conditions who have specific energy needs. I cannot see how on earth you would try to compensate people for all the different factors. From our initial research, we know that in a room like this we might have a factor of ten difference between us as individuals about what our personal allowances are. If you go round saying that a person who has ten times higher emission than me is allowed a lot more because there are all these factors that are problematic for them, like they have a big house and they live in the country or they simply have to drive 100 miles a day or whatever, how am I as a low emitter going to feel about that? Pretty irritated, I would think. There are more low emitters than there are high emitters. There are moral reasons for not varying the allowance, except perhaps in a small number of cases. The practical reasons completely dwarf the argument and principle about why you simply could not run a system like that.

Q196 Jo Swinson: Do you think there is a danger that it exacerbates the problem of fuel poverty in that those that are already being hit hardest have more of a difficult time?

Dr Fawcett: Until we do a proper national survey of personal carbon allowances that takes a sample of several thousand and looks at their social, demographic and housing and travel needs, we will not know the proper answer to that question. We need that kind of serious research into what are people's carbon emission profiles and who are those people before we can answer that with proper confidence. What we do know is that lower income people on average have lower carbon emissions than higher income people, largely because of travel patterns. They do not travel as much and they certainly do not fly as much. Their household emissions per capita may not be lower because they may be living in smaller household groups, generally speaking. They have less good infrastructure. There are various reasons. In general you would expect most poorer people to be better off but not everybody will be. People in fuel poverty are a particular group. Not all of them are the same people who are in poverty, but there is a fair degree of overlap. Clearly, fuel poverty is still an important problem in this country, given that some of it is dealt with through income compensation, giving these additional allowances to people which could be like giving extra personal carbon allowances, but there are also things like the Warm Homes Scheme, which is improving infrastructure for people's houses which has to be the way to go long term because it enables people to live using less energy and less carbon.

Q197 Jo Swinson: You mentioned you had started doing a little bit of research about whether or not to include children in the scheme. Could you touch on the findings so far?

Dr Fawcett: Essentially with children and adults there are three options. You can either give children no allowance and you might give adults some additional payment or you might not to try and compensate them for the additional carbon cost for their children. You could give children a partial allowance or you could give them a full allowance. We do not have good enough data on how much but we do know that having a child in the house in general increases carbon emissions in household energy use and increases some of the personal travel patterns as well. Again, we do not have good enough data to say it is 23 per cent of the child at this age or whatever. You can talk about children's rights and therefore whether they should have some allowance on that basis but the real thing most people look at is what are the distributional impacts. We know already that there are more children in poverty than there are adults in poverty. The last thing you would want to do, in a scheme like this which is saying we are trying to be fair; we are trying to not disadvantage people who are already disadvantaged in

society, is to say that children get no allowance. Too bad, parents; you just have to deal with it. The people who will be hit hardest by that are single parents, low income parents, anybody who has more than one child. That does not seem an equitable way of doing things. You could either not give children an allowance and compensate parents financially through the child benefit system or you could say, "Okay, we have done the research and we think a child on average adds 30 per cent to a household carbon budget and therefore we are going to allocate those allowances to the children in the care of parents until they are 16 or 18." In our initial research, we have done some workshops with teenagers debating with them what they think. They pretty much went down the partial allowance route, having had a debate on all the different options. This is early stage research but that would be our feeling at the moment. That might be the way to try to do it. We feel it is more equitable and more clearly fits with the aims of the scheme.

Q198 Mr Caton: This also was an issue that we raised with Mr Prescott on the usefulness of pilot schemes. In your memorandum, you refer to the contribution of carbon rationing action groups to our understanding of how personal carbon trading could work. Many of our witnesses have argued that the information you can get from any type of voluntary scheme is very limited because inevitably it is unrepresentative of the wider population. How do you respond to that? Do you think it would be feasible or indeed desirable to run a mandatory pilot scheme?

Dr Fawcett: To answer the second question first, we do not think it would be feasible to run a mandatory pilot scheme. This piece of research that we are doing at the moment, partly funded by the Esme Fairburn Foundation, we started off with this optimistic view: what if we could run a mandatory pilot scheme? How would we do it? We have consulted very widely. We have people on our steering group including Richard Starkey and the Centre for Sustainable Energy in Bristol. We fairly quickly realised this was not a runner. We are not going to be able to have a mandatory pilot scheme. We know that. Nevertheless, is there value in trying to run some sort of pilot scheme? Over the past few months, we have held workshops and talked to a lot of other academics. Our contribution is going to be yes, it is worthwhile but it is a difficult research task and you are going to have to be quite careful about the way you interpret the results. What we want to do is involve people in running the best mock-up we can of personal carbon allowances for a year and to give the participants essentially a year's experience of living with a version of personal carbon allowances, find out what they do, monitor their attitudes, interview them, look at their before and after carbon emissions, talk to them about how the scheme went, what they felt about it, what worked well, what did not work; what was easy, what was difficult. Through their living experience of trying to do it we

can learn a lot more on quite a deep level about people's behaviours, responses, attitudes and what they do. There are all sorts of reasons why it is not the same as running a mandatory scheme. We are very well aware of that. Nevertheless, it seems to me it is a good way of getting some quiet important data on how people really feel and react to a version of the scheme. You can go far with asking people about attitudes in focus groups. You can try and do trading type exercises that Matt was talking about using Internet only. Those all give you part of the jigsaw but we think this kind of research trial gives you a chance to go into a lot more depth and gives people real experience, so that they really know what they are talking about when they tell you what they thought about it at the end. You find out what they have done and how they have reacted. You find out was this idea of personal carbon allowances psychologically important. It can be more powerful than a tax. We can try and find that out because we can have people we would give a dummy carbon taxation scheme to or there is a different kind of research thread or whatever. We can try and get a lot further with the human side of what this scheme would be but we cannot answer all the questions through trials because they are not the same as the real thing. We know that.

Q199 Colin Challen: What is the next thing the government should do?

Dr Fawcett: Defra are currently setting out their research budget to do particular pieces of research on personal carbon allowances. Either through the Research Councils or through the government, there needs to be a lot more research effort going into this. At the moment in terms of full time people doing research on this subject in the UK, there are maybe three to five full time people equivalents. This is an idea that has had a relatively small amount of research on it. It has come very high up the policy agenda which is great but the questions people are asking are well in advance of what the researchers can answer at the moment. If we want proper answers to these questions, there is no substitute for getting the evidence. There are two key, fairly big bits of research that I think the government needs to do. First, we need a large scale survey on personal carbon emission profiles at the moment, some combination of the English house condition, an energy survey and a passenger transport survey and include international air travel. If we get everything that we need to know about these people, then we can answer all these questions about distributional effects, who is emitting what, where and why; what are their opportunities for reduction. Even if you are not interested in personal carbon allowances, you need that research done to say anything about indirect taxation, extending the EU ETS. Whatever you want to do in terms of moving people towards lower carbon lifestyles, you need to know who is living what kind of carbon lifestyle at the moment and we just do not know. That is absolutely vital and it is a traditional, government type

task: go out there and collect the data. You have the protocols in place. It should not be vastly expensive or difficult to do; it just needs to be done. That is my number one task. The number two task - possibly this is for a Research Council rather than the government - is to do funding for these kinds of trial schemes into personal carbon allowances to start getting the in depth information about people's psychology, behaviour, interactions with the scheme that we really need, and then continue with the smaller, individual bits of research. We also need to do the technology research, the economics research, the legal questions, the interfacing with the EU ETS. There is a broad sweep of research that needs to be done but I would highlight those two tasks as things that we really need to push forward. They are quite big tasks. They cannot be done just by the existing four or five of us who are active in this field. It needs more people and more expertise to come in.

Q200 Colin Challen: Are you aware if any other countries' research establishments, universities or whatever are looking at the suggestion of PCAs?

Dr Fawcett: There is a minor amount of work in a few other European countries. I went to a European energy conference this summer which runs every couple of years. I met all the other researchers and held a session about this. I asked them what they were doing. There has been a small amount of work in France looking at transport aspects of PCAs. Finland are starting to look at a bit of research on this. There has been some research in Holland but that has not been made publicly available. It was done by consultants for the government. I am getting a PhD student coming over from Belgium to do some research with me, so it is just starting but they are looking to the UK to see what we have done because it is faltering. It is just starting to get going in some other European countries but we are way ahead, even though I have said our research effort has been relatively low.

Chairman: Thank you very much indeed.