

Business, Energy and Industrial Strategy Committee

Oral evidence: Energy Efficiency, HC 1730

Tuesday 26 March 2019

Ordered by the House of Commons to be published on 26 March 2019.

[Watch the meeting](#)

Members present: Rachel Reeves (Chair); Vernon Coaker; Mr Tanmanjeet Singh Dhesi; Drew Hendry; Stephen Kerr; Peter Kyle; Mr Ian Liddell-Grainger; Sir Patrick McLoughlin; Albert Owen; Mark Pawsey; Antoinette Sandbach; Anna Turley.

Questions 279 - 386

Witnesses

[I](#): Lord Deben, Chairman, Committee on Climate Change; Jenny Hill, Committee on Climate Change, Team Leader, Buildings and Industry.

[II](#): Philip Graham, Chief Executive, National Infrastructure Commission.

[III](#): Jenny Holland, Policy and Public Affairs Specialist, UK Green Building Council; Sarah Kostense-Winterton, Executive Director, Mineral Wool Insulation Manufacturers Association; Tatiana Bosteels, Director, Hermes; Tom Thackray, Director of Infrastructure and Energy, CBI.

Examination of Witnesses

Witnesses: Lord Deben and Jenny Hill.

Chair: Thank you very much, Lord Deben and Jenny Hill, for coming to give evidence to us this morning on energy efficiency. We appreciate your time. We know we are pressed for time this morning, so we will try to be as efficient as possible in our questions, and I know you will be with your answers.

Q279 **Drew Hendry:** Are the Government on track with their energy efficiency policies to meet both the EPC targets and the recommendations in the 2018 progress report?

Jenny Hill: It is fair to say that the UK Government are currently not on track. Progress has slipped in relation to the EPC C target. In particular, on owner-occupier homes, we are still waiting for the 2018 action plan with the package of incentives targeting this portion of the market, which makes up two thirds of the total. We have also slipped behind in setting out the trajectories for the private rented sector standards to go through to C by 2030 and the socially rented sector.

Lord Deben: It is way behind. There is no policy to solve these problems and to meet these issues. We have just passed what was a very disappointing piece on rented accommodation with a ceiling of £3,000¹, which is less in reality than what they had promised to do about six years ago when the whole process started. It seems to me that the Government will have to change this very fundamentally if they are to have any chance whatsoever either of doing this or of meeting their fourth and fifth carbon budget, because this is a major contribution to it.

Q280 **Drew Hendry:** Do you agree that the carbon budgets are a challenge?

Jenny Hill: Yes, we are off track. Progress currently, in terms of insulation rates, is only 5% of peak market delivery in 2012.

Q281 **Drew Hendry:** Under current tracking, how long will it be before we see housing emissions start to fall?

Lord Deben: That is a slightly more complicated question, because there are other influences on housing emissions. For example, there is the fact that the Government still have not raised the standards for new buildings. At the moment, we are building more trouble every year. Until they change that, it will be another way in which housing emissions will not reduce. I do not think there is a date on it, except that it is way, way beyond the point at which they have to meet the fourth carbon budget, which is a statutory requirement.

Q282 **Drew Hendry:** Would you say it is actually getting worse?

¹ Note by witness: Should be £3,500 not £3,000.



HOUSE OF COMMONS

Lord Deben: It is true that new houses are in general rather better than old houses, although they are nothing like as good as they ought to be. If you add what the Government intend to add every year, which they do not always reach by any means, but taking that as 300,000 houses a year, you are adding 300,000 emitting houses. They may emit less than a comparable house built 20 years ago, but a motorcar ought to be more efficient than a motorcar you produced 20 years ago. They still emit much more than they ought to emit. Until we get towards zero-emitting houses, we are making the problem worse all the time.

Q283 **Drew Hendry:** Jenny, do you have a final comment on that?

Jenny Hill: There are a whole range of actions that we need to see fall into place. The ones we have highlighted in the latest progress report and our recent housing report, which came out last month, include tackling the performance gap, overhauling compliance and enforcement, skills and finance.

Q284 **Antoinette Sandbach:** Picking up on the point that we are building houses now and storing up on problems for the future, I was quite surprised to note that EPC standards apply only from the date that planning permission was granted and not the current standards. Have you seen any attempts by the Government to change that?

Lord Deben: We are pressing the Government very strongly. It is one of the key issues. We are still building houses today to the standards that we dismissed five years ago, because of the way in which this operates.

Q285 **Antoinette Sandbach:** Are those the net zero-carbon standards or the earlier ones?

Jenny Hill: These are the earlier ones.

Lord Deben: No, I was not thinking of that. I was simply thinking that, in the way the system works, when you change the standards, that only applies to buildings that do not have planning permission at that point. If you have planning permission, you can go on building to the previous standards. When new standards are introduced, we want to see them made compulsory on all building, except where the builder can prove that it is genuinely true that he has gone so far in the building that change to new standards would be inappropriate.

Q286 **Antoinette Sandbach:** If we are looking ahead to 2050, how much do current standards need to be strengthened? How far would the targets need to be tightened, if the Government want to go for net zero?

Lord Deben: I cannot give you the exact figure for net zero, because we are producing that report, as you know, within the next month or a little longer than that. As for our present statutory targets of an 80% reduction by the year 2050, it is our view that we have to move to building houses that are of a very high standard, perhaps not exactly the passive house standard, but something close to it. The Chancellor's



HOUSE OF COMMONS

announcement of his changes for new housing is very welcome, as long as we do not allow it to skip another 10 years because we have not made this change in the way the planning permission arrangements work. If the Government do what they say they are going to do, and do it from that point, it will be a very major step forward. The sadness is that we have not tightened it up earlier.

As Jenny says, the other sadness is that it is very badly checked. The local authority is supposed to check the housing. As I am sure the Committee knows, you build a house, you call it "Cotswolds" and you get that house measured. Then you go to a local authority and you say, "I am going to build 25 Cotswold houses, and here is my bit of paper to say that they meet the requirements." Of course, there is a difference between the one you build very carefully to get the requirements and the ones you build as you go out. That is one of the problems. The local authorities have less and less ability to check whether houses are built to that standard. There is some very good evidence, and we have seen it in the newspapers, that that is not happening.

Q287 Chair: What is your recommendation, Lord Deben, on how to sort that out? If local authorities are not doing it, should more pressure be put on them? Should someone else be doing it?

Lord Deben: It seems to me a proper role for local authorities. They have that role, but there are a number of technical things that could be done to help. For example, if you have a modern boiler and it is not properly set, you may as well not have a modern boiler. It has to be properly set. Therefore, I would like to see, first, more resources for local authorities to do the checking, which is crucial. If housebuilders knew they were going to be checked and there were serious results if they did not build to the standards, there would be a change. I would also like to have a checklist, in which there were certain obvious things that every local authority had to have signed off before the houses were in fact passed.

Q288 Mr Liddell-Grainger: Lord Deben, can I ask how the Government's ECO scheme could allow for more carbon savings to be made?

Lord Deben: I am sorry?

Mr Liddell-Grainger: I will tell you what it is. We have this scheme. The ECO scheme is going to go on for another five or so years. This has worked on the saving of carbon. We want to allow for more savings to be made. How can that be achieved?

Lord Deben: First of all, you have to increase the levels of investment, and that is not in sight at the moment. We have to meet the Government's targets to bring all fuel-poor households to a minimum EPC by 2030 and all homes by 2035. That, we say, will cost about £1.2 billion a year.

Jenny Hill: That is the fuel poverty side.



Lord Deben: Yes, that is only the fuel poverty side where you get a double whammy because you are doing something valuable socially as well as something important for the environment. We published a joint piece of research in 2017² with the Committee on Fuel Poverty, which suggested we could do this with the ECO budgets through savings on the winter fuel payments. It seems to me a curious concept that we pay everybody a winter fuel payment, yet we do not have enough money to do the thing that really matters, which is to improve people's heating.

I feel very strongly about that socially, because people should not be living in cold houses. They should not be in that position. As a politician, in the past at least, I think it is just outrageous. People are afraid to say, "The winter fuel allowance should in fact be going to people who need it and not to me". This is a very great sadness.

Jenny Hill: The research found that, if you combine the budgets for the winter fuel payment and the warm home discount, it totals £2 billion a year. Currently, the estimate is that only up to 10% of that actually goes to the fuel poor. There is a great opportunity there to improve how we direct funds in this area.

Q289 **Mr Liddell-Grainger:** According to some of these figures, it is going to take up to 21,000 units being put in a week to achieve this, with a funding of £640 million a year. It does not really make any sense to me. We are going to hit a buffer, are we not, in 2022?

Lord Deben: The first thing you have to do is to accept that the promises and commitments you have made are ones that you intend to meet. At the moment, we have budgets and agreements that you are not intending to meet, or at least you are not producing the programme to meet them at the moment. The first thing we have to do is to see that there is a programme that has some hope—I will put it even as delicately as that—of meeting the promises that are made.

Mr Liddell-Grainger, I am sure you would agree. In a company, if you had told your shareholders, "We are going to achieve this", and it became clear that you had not even started on the programme, the shareholders might be asking whether you were actually the management who ought to be in charge.

Q290 **Mr Dhesi:** Lord Deben, following the closure of the Green Deal, as the chairman of the Committee on Climate Change, what package of measures would you like to see in the Government's upcoming action plan for energy efficiency to drive demand within the owner-occupier retrofit market? Would it be perhaps low-interest loans, stamp duty, regulation or green mortgages?

Lord Deben: As you know, my job and the job of the Committee is to ensure the Government have targets that are the most cost-effective

² Note by witness: The research was published in 2018 although most of the work was undertaken in 2017.



HOUSE OF COMMONS

ways of reaching the necessary steps towards the statutory 80% reduction. We are not in a position to say, "That is the way to do it", but to present a series of ways. The Government must, as the democratically elected Government, choose those ways.

In response, I would like to see the Government, first of all, do something very serious about rented accommodation, particularly at the bottom of the scale, because £3,000 is a nonsense. It is necessary to have a figure much higher than that. Those who are renting this accommodation out should not be discouraged by the mechanism. First of all, help the poorest and the people at the bottom end of the scale. Secondly, there is something to be done with stamp duty. It always seems to me that the real way to do it is to say that you cannot sell a house unless you can show it has gone one stage up on the efficiency thing, until you get them all to C. If you have a house that is G and you sell it, you should have shown that it has moved up one space. If you do not do that, there should be an arrangement where money from the sale would be held back until the next person could do that.

You can do that in various ways. You can do it through the mechanism of the sale or through stamp duty. It seems to me that you have to find a way to do this. At the point at which people have the money to do it, or the point at which they have to spend money and they will not have to spend so much, you have to make sure that happens. Energy efficiency is by far the cheapest way of reducing our emissions.

Q291 **Mr Dhesi:** Ms Hill, what measures would you like to see in the Government's action plan?

Jenny Hill: In 2016, we published a report called "Next Steps for UK Heat Policy", which included three "what works" studies, including one on domestic energy efficiency. Off the back of that, the evidence shows that, essentially, at a broad level, you need a sufficiently attractive package for householders, which is aligned with trigger points such as moving home or renovating. Over the past 10 years—I am finding the exact number to make sure it is correct—just over half of householders have carried out renovations. There is a space for a revenue-neutral scheme, potentially stamp duty, or for subsidising loans. It is really important that we help householders with the upfront costs and we raise the profile of this, so it is at the forefront of their minds when they are thinking about these big decisions.

Q292 **Antoinette Sandbach:** Lord Deben, you spoke about how the cap was ridiculously low at £3,500, in terms of trying to get social and private landlords to retrofit their properties. Apart from raising the cap, what other delivery mechanisms are needed to encourage landlords to retrofit their properties up to band C?

Lord Deben: You should start with that, so you can see how well it works. You could then move that up the scale.



Q293 **Antoinette Sandbach:** When you say “that”, do you mean raising it?

Lord Deben: Yes. You also have to make sure there is proper inspection. I come back to the fact that you can make all the rules you like in the world, but, if nobody ever checks whether this has happened, it is no use at all. Check, raise the standard, have better checking systems, and then move it up the scale. At the moment, we are talking about the landlords letting the very coldest of houses. It seems to me that the next stage should be to move up the scale so you are then using it not just for a social purpose, although it is a social purpose because it reduces people’s actual payments. You move it up until you are doing what you promised to do, which is to bring all those houses up to band C.

The other thing that runs parallel to it is that we have to make all this much more comprehensible to people. That is the point Jenny makes, and it is absolutely right. When you go past housing estates that are selling houses, they very often have big notices up saying, “Buy this house for £600 a month”. I do not think they should be allowed to do that without having the cost of the energy in that figure. If we really get people to understand that the energy cost is a crucial part of the outgoings every month, as crucial as the mortgage, we begin to get a situation in which housebuilders are much more likely to make an effort to show how energy efficient their houses are.

I went to a Persimmon housing estate the other day. I asked about the energy efficiency of the house I was looking at, and I was told it was very high. I asked the lady, “When you say ‘very high’, what do you mean?” She said, “Very high”. I asked, “On a scale from one to six, which we normally use, where does it come?” It was quite clear that she did not know whether one was the top of the scale or six was the top of the scale, so she said “very high” again. When I asked, “Could I have a look at the certificate that tells me what it is?” she said, “We have not had those yet”. We have to recognise how bad the present information system is. There are things to do, as I have suggested, but there are also things to have other people do. One of them is that you have to quote the energy cost and you have to show the certificate immediately.

Q294 **Antoinette Sandbach:** My understanding is that you are not allowed to sell a house without an energy performance certificate. Persimmon might be in trouble for that. In terms of the really hard-to-treat houses, EPC E and below, should there be something specifically targeted at the landlords of those houses other than raising the cap, which you have already advocated?

Lord Deben: It seems to me that the Government have to make a decision between the difficulty of not wanting houses not to be let and the difficulty of not wanting cold houses to be let. There are ways in which there could be, over the top of the £5,000 of whatever the limit was decided to be, additional help available, but I would want to see it tied to some sort of insistence. In other words, it should be available but you would have to take it on board. In the end, it is the tenant who pays



HOUSE OF COMMONS

the cost of the landlord not making the changes. Many of these changes are very, very simple. For example, it could simply be putting proper insulation in lofts. It is appalling how many houses do not have that even today.

Jenny Hill: We think it is really important that the Government now implement the recommendations of the Green Finance Taskforce. This includes recommendations around green mortgages and green finance more generally, but it also includes recommendations around better data. That could be green building passports for all homes. It is about ensuring that the homeowner or householder is aware of the data on the as-built performance of the home, and can use it to ensure that they are living in the home they have paid for.

Lord Deben: Personally, I think we ought to go further than that. I would like to see it being much more possible to sue a builder for selling you a house that is not what it says on the tin. At the moment, you do not have an as-built certificate, so you do not know what is on the tin. After all, buying a house is the biggest thing that any of us do in our lives and it is the thing we know least about. We really do not know about the building arrangements in most cases. You need a very clear statement of what the house is supposed to be like. That would make a lot more of them closer to what they promised. Then you ought to be in the position of being able to take the builder to court.

Q295 **Vernon Coaker:** Can you just elaborate a little? I was very interested in the last point you were making about the as-built performance. Barratt and Persimmon told us they would be happy to test that. Should that be a legal requirement, then? Should the Government require that to happen and put it on a legal basis?

Lord Deben: I think so. Mr Coaker, if you talk to some builders who are trying their best, I am sure you will get support. If you talk to some other builders, you will not discover that. Interestingly, when the Government, I think wrongly, got rid of the original zero-carbon homes policy, quite a number of builders had prepared for that and were ready to do it. The people who laughed all the way to the bank were the builders who decided in advance that the Government would never get on with that, never prepared for it and are still building houses that are, frankly, not suitable for today's demands.

Q296 **Vernon Coaker:** Talking about the changes we need to bring about a better system, if we had a future homes standard, what would need to change to ensure housebuilders deliver those energy efficiency measures within a future homes standard?

Lord Deben: There are two separate things here. One is that you have, in the normal way, a detailed standard. I use this phrase because there is not one that covers it otherwise, but you would use something near to the passive house standards so that it has very low energy requirements but is also properly ventilated. The other problem we have with climate



HOUSE OF COMMONS

change is that we will have periods of very hot weather. The fact that some of us were able to have lunch out in the garden in the middle of March reminds us how different the weather is going to be. We do not want to have the danger, which we are having, of people being too hot. You need both of those. Those are in the standard.

The other thing I have found very peculiar is this. If you want to make very considerable alterations to your house, as a particular friend of mine has been doing, there is no ready place to go with a proper checklist, rather like a wedding list, that says, "Have you thought about this, this, this and this?" There is a real need for the Government to seek to get the Building Research Establishment, the Energy Saving Trust and suchlike to produce a handy way in which, when you are doing some sort of extension or renovation, you can ask, for example, "Do I have one of those things for the shower that takes the heat out of the shower and puts it back? Is that being included?" There is a whole series of things, and you could really get part of the system if only you gave people that simple list.

Q297 Vernon Coaker: That is very interesting. I have one last thing, really. Imagine you had a crystal ball. We were surprised that the housing companies, the developers, talked to us about the fact they built to the regulations that were in existence at the time they were granted planning permission. Subsequently, regulations may have been improved but they do not have to conform to them. How long is it going to take to sort this out? Do you see what I mean? They are building to standards we already regard as out of date.

Lord Deben: First of all, we ought to be reforming them more quickly. It takes too long between times. Secondly, as I say, we should introduce them on the basis that they apply to any building that takes place after that date, unless the builder can prove—and it will be on them to do so—that they have reached such a stage in the construction that to change it would be far too difficult.

Vernon Coaker: That is very interesting. Thank you.

Q298 Albert Owen: What policy would you like to see, Lord Deben, from the UK Government to help regional and local authorities deliver energy efficiency improvement in their area? Are there lessons to be learned from how other devolved Administrations, Scotland in particular, deal with it?

Lord Deben: Well, Mr Owen, I do not want to leave Wales out of it either.

Albert Owen: No, I will come to Wales in my supplementary.

Lord Deben: In general terms, both Scotland and Wales are doing better than the United Kingdom as a whole. One thing I am sad about is that the English part of the Government do not recognise that they should learn from the devolved Administrations. For example, on waste Wales is



HOUSE OF COMMONS

significantly better than any other part of the country. In general terms, Scotland is better than the rest of the country. They have found some innovative ways to meet these things. The first thing I would want to say is that the United Kingdom ought to learn from the devolved Governments.

Secondly, there is a need for much greater co-operation in trying to face the real issues. Some people may have been doing it better, but the issues are very often the same. Scotland has the particular issue of having a really weather-dependent economy. That is a really serious matter.

The third thing that the Government will have to look at is the impact of the situation, were we to leave the European Union. A very significant amount of the best work that has been done has been done with the help of European Union funds. The Government have promised that this will continue, but, if you take Wales, I went to a very important estate where they had put in extremely good energy efficiency measures. A schoolteacher I talked to said, "Our children are coming to school dry for the first time. We have never seen that before". That was the nature of this very bad estate. That money was entirely from the European Union. I am very concerned that central Government should not allow that to stop.

As I am sure the Committee will be aware, I think that leaving the European Union is a nonsense and very damaging to us all. It is also quite peculiar to shoot oneself in the foot, but the fact is, if we are going to do that, we have to make sure we do not ask the poorest to pay for it. They are going to get the trouble anyway, so do not ask them to pay for it.

Q299 Albert Owen: Can I just cut across you there? The danger with the Shared Prosperity Fund is that we will be sharing the pot even more thinly. Those areas that have been successful might lose out and fall back. On the issue of resources, you said quite rightly that energy efficiency was the cheapest way of cutting emissions. We have evidence from previous witnesses to suggest that Scotland was spending four times what England did on energy efficiency, Wales twice as much, and Northern Ireland 1.5 times. There is a resource issue here. My question to you is this. Is it the fact that central Government are not distributing this to the regions and the local authorities, or are the local authorities themselves not using it in a practical way?

Lord Deben: Like most things, it is a bit of both. It is true that the funding systems have a very serious effect on this, particularly the Welsh funding system. It is not just because you are asking the question, but it is quite clear that Wales is underfunded on the system we have. That is one of the things I would hope we are going to put right, because it is not fair.

Q300 Albert Owen: You can come back. Jenny, do you want to add anything



on that?

Jenny Hill: The recommendations in our recent housing report are essentially threefold. We say that local authorities need clear guidance. In particular, MHCLG should clarify their statutory duties in relation to both mitigation and adaptation. There is a clear need for technical support. Examples of that include local energy planning and overheating. I have to say that it is appalling that currently 20% of homes overheat. That is 4.5 million. It obviously is not going to improve.

The last thing, which we have talked about, is finance. The three of those need to go together. There are existing models in Scotland and from the UK Government of providing combined technical assistance and finance, which can be built on.

Q301 **Albert Owen:** My final point is on political structures. Is there any evidence that new local, regional and mayoral areas are performing better because they are new institutions?

Lord Deben: I only know of anecdotal evidence. There are some where clearly this has been put high up on the agenda. The whole point about having elected mayors, I suppose, is that they have to have a personal agenda. You have to get it high up on that agenda.

Q302 **Albert Owen:** I would argue that the newer institutions have done that in Scotland, Wales and, to some extent, in Northern Ireland. There is a possibility that England could follow.

Lord Deben: Having a smaller area to cover is convenient for people noticing as to whether you are covering it properly.

Chair: Thank you very much. Thank you, Lord Deben and Jenny Hill, for giving evidence to us this morning.

Examination of Witness

Witness: Philip Graham.

Chair: Thank you very much, Philip Graham, for coming this morning to give evidence. Thank you for sitting in during the earlier session with Lord Deben and Jenny Hill. We have another panel after you, so we will try to get through this as quickly as possible this morning. We very much appreciate your time.

Q303 **Drew Hendry:** Good morning. Should the Government treat energy efficiency as a national infrastructure priority?

Philip Graham: To answer that, you have to track back a little through the work we have done. Our remit requires us to make recommendations about the totality of what you call economic infrastructure: transport, communications, water, et cetera, but also including energy infrastructure. It is worth saying that it includes energy but not housing.



HOUSE OF COMMONS

That is the lens through which we have looked at this issue. We have looked at energy efficiency and the way it affects the infrastructure requirements for energy going forward.

The key way in which we advise the Government on infrastructure policy is through our "National Infrastructure Assessment". We published the first of those in July last year. We are supposed to publish one every five years, but because we are a new body we had to do the first one quite quickly, so we did it in about two or two and a half years.

Q304 Drew Hendry: You have described the lens through which you approach it and the measures you take to prioritise the recommendations, but the question is whether that is enough. Should energy efficiency take more of a centre stage in that calculation?

Philip Graham: Where we got to when we did this work is that energy efficiency is a really important part of how you meet your energy needs over the longer term if you are to decarbonise the energy system, which the Committee on Climate Change has made quite clear we need to do in order to meet our legislative carbon targets. In particular, if you are going to get a grip on how we heat our homes, we looked at the cheapest way to do that, the way that is going to place the least additional burdens on the economy and households.

Within that, in the long term we are going to have to change the method of heating. That might be through hydrogen gas; that might be through the use of electricity and heat pumps. In either of those scenarios, we envisage a big programme of energy efficiency measures—this is where we got the figure of 21,000 a week that was referred to earlier—that we think would still push the cost down and that we have recommended should be taken forward strongly by the Government. Yes, it is an issue that we have identified as a priority. The Government need to do more, and we have made a fairly firm recommendation on that

Q305 Drew Hendry: It sounds to me, the way you are presenting it, a bit reactive as opposed to proactive, in terms of chasing energy efficiency as part of the infrastructure priorities.

Philip Graham: No, I do not think that is true at all. There are a number of lenses through which to look at this, but we sought to answer the question as to what is the most effective and efficient way to decarbonise our energy infrastructure and the way we power our country. We think we have made a very strong recommendation that energy efficiency should be a central part of that, and that the Government should be pushing to improve energy efficiency at a significantly faster rate than they are now, through a combination of funding, regulation and market incentives.

Q306 Drew Hendry: Following that through, then, you would say it needs to be a national infrastructure priority.



HOUSE OF COMMONS

Philip Graham: I am slightly nervous about this phrase “national infrastructure priority”, because I know some other groups have been using it, and I am not quite sure what they want to attach to it.

Drew Hendry: Just take it at face value.

Philip Graham: Broadly speaking, yes, we have identified a set of priorities in our recommendations, and improving energy efficiency is one of those. We want to see the Government respond positively to our recommendations.

Q307 **Drew Hendry:** And it should be a priority.

Philip Graham: Yes.

Q308 **Peter Kyle:** Good morning, Philip. What calculations did you make regarding the economic benefits of the national energy efficiency programme?

Philip Graham: I am going to disappoint you slightly with my answer to this, because, again, you need to come back to the lens through which we looked at this. In terms of the benefit we were seeking to achieve, the question we set ourselves was how to achieve a zero-carbon energy sector in the UK. The benefit of decarbonisation was almost taken as read within that. The question, then, is what the most efficient and lowest cost way of doing that is.

If the Government were to adopt what we have said is the target and then achieve it, the 21,000 measures per week, it would reduce the costs of decarbonising our energy system. Even taking into account the cost of achieving that level of efficiency, the net impact would be a reduction in cost of between £6 billion and £17 billion in total. The range relates to the cost of the energy generation forgone.

Q309 **Peter Kyle:** How do energy efficiency investment returns compare to other infrastructure investments?

Philip Graham: We have not sought to answer the question in that way. We have looked at what we think is the most cost-effective package to achieve zero-carbon efficiency. We think that includes a very significant increase in the use of renewables, a continuing but perhaps less fast increase in the use of nuclear, and a significant ramping-up of renewables. We did not approach this by ranking them on a cost-benefit basis.

Q310 **Peter Kyle:** Why not?

Philip Graham: Why not? Rather than looking at a set of measures in isolation, we sought to look at the total system cost. We identified sets of packages and then looked at what the total system cost was in relation to those packages. In particular, we took it as read that energy efficiency was going to be an important part of this, and we looked at how far you



HOUSE OF COMMONS

could go in increasing the rate of energy efficiency measures before you hit a point where it was uncertain whether they would be—

Q311 **Peter Kyle:** It makes it almost impossible for us to compare the returns we get on different types of investment, does it not? Do we not look to you to tell us where we get the best returns from spending public money?

Philip Graham: Yes, and that is what we have tried to do. We have tried to assess what the most effective and cheapest total-system-cost approach to decarbonising the energy system is. To come back to this, we have identified a level of energy efficiency investment that we think delivers net benefit, whatever choices you make elsewhere in the system. We do not know at this stage whether the most cost-effective way of decarbonising our heating system over the longer term is through decarbonised hydrogen or through electricity and heat pumps, so there is potentially further you could go on energy efficiency that would deliver a significant benefit, depending on which of those routes you take. As that becomes clearer, you can go that far. We have sought, on energy efficiency, to identify the level of no regrets.

Q312 **Peter Kyle:** I have no idea what “the level of no regrets” means.

Philip Graham: Sorry, that is not particularly clear. I mean the level or scale of programme that is going to deliver benefits and bring down the total system cost, whatever the future looks like in terms of heating.

Q313 **Antoinette Sandbach:** You made this recommendation, and I am very quickly going to read the paragraph: “there are over 21 million individual improvements to buildings in England that together could save billions of pounds. This includes insulating 10 million lofts, 6 million floors and almost 5 million walls. This is equivalent to 21,000 improvements being installed every week between now and 2035. The current rate of progress is around 9,000 improvements installed per week.” Now having up-to-date information, do you accept that the costings in your report are wrong?

Philip Graham: I am not entirely sure why you think—

Q314 **Antoinette Sandbach:** You have made an assumption that 9,000 measures are being installed per week, but there was an average rate of 2,400 insulations a week in 2017 and an average of 3,500 a week in 2018. Your 9,000 figure was based on a UK-wide figure and yet you are talking about measures in England.

Philip Graham: The 9,000 figure came from the BEIS—

Q315 **Antoinette Sandbach:** It came from the BEIS home energy efficiency statistics. That showed that the insulation measures never got installed at that rate under ECO. The actual figures are the ones I have given you.

Philip Graham: There two separate sets of figures in that report, one of which is the insulation measures that were installed under ECO and to some degree the Green Deal, but the Green Deal ones are handfuls.



HOUSE OF COMMONS

There is also a piece that sets out in total what the level of insulation measures—

Q316 Antoinette Sandbach: Well, I am going to challenge your figures, because the only possible way that you get to 9,000 measures a week is if you count everything since ECO started until the end of 2017, including defunct measures such as the Green Deal, the Green Deal Home Improvement Fund, the Green Deal Cashback Scheme and the Green Deal Communities Scheme. That does not deal just with England but includes figures from Wales and Scotland, and you are talking about England in your report. It also includes boilers. I will give you the information I am holding in my hand, which is a detailed analysis of your report.

Philip Graham: The numbers I have did not come from the household energy efficiency headline report, which just reports back on ECO and the Green Deal, but the 2017 detailed report. This was a report published in March 2018, but it said that in 2017 249,000 cavity wall measures were installed, not simply those installed on the back of ECO but installed across the country, including by—

Q317 Antoinette Sandbach: How are you going to know that?

Philip Graham: These are the figures that are in the official Government statistics.

Q318 Antoinette Sandbach: I am challenging those figures, but I will move on.

Philip Graham: Just let me just set out what it says. There were 249,000 cavity wall insulations, 195,000 loft insulations and 16,000 solid-wall insulations.

Antoinette Sandbach: Is that per week?

Philip Graham: No, in total over the year. That takes you to 442,000 over the year, which is about 8,800 a week. It would not be the same amount every week.

Q319 Antoinette Sandbach: Those figures are not just for England; they include Wales and Scotland. You are giving figures for England on an all-UK basis and not an England-only basis, are you not?

Philip Graham: I do not know whether those are UK figures. I would have to go back and check.

Antoinette Sandbach: Perhaps you could check.

Chair: If you could get back to us and confirm what the England numbers are, that would be very helpful.

Philip Graham: Yes.

Q320 Antoinette Sandbach: If those figures are wrong, it affects your funding figures potentially, does it not?



HOUSE OF COMMONS

Philip Graham: No, I do not think so. The funding figures were ultimately a judgment on what could be afforded within a broader fiscal remit, which also had to take into account policy on transport, flood defences, funding for telecommunications and so on. The £3.8 billion within that, which we said should be spent on social housing, was calculated on the basis of a forward-looking picture of what we thought could be afforded and what might achieve the EPC C rating across social housing.

Q321 **Antoinette Sandbach:** You recommend the Government continuing to trial innovative approaches to driving energy efficiency within the owner-occupier market, but you say nothing more about what those should be and how the finance should be devoted to them.

Philip Graham: We are quite clear that the Government should continue with the ECO scheme, but yes, as I said at the beginning, this was a two-year piece of work looking at policy across the totality of the energy system, across transport, communications and water.

Q322 **Antoinette Sandbach:** Can we just focus on energy efficiency? That is what this inquiry is about.

Philip Graham: Absolutely, I appreciate that, but it is important to be clear. Our role was to set—

Q323 **Antoinette Sandbach:** Mr Graham, we have very limited time, so I am trying to focus on energy efficiency, because that is what we are interested in and that is what we are getting evidence for in this inquiry.

Philip Graham: I appreciate that.

Q324 **Antoinette Sandbach:** You did not make certain recommendations. I believe you made an original promise to the Treasury to produce a dedicated report on energy efficiency that would support the Treasury in its funding review. Is this report that?

Philip Graham: We said to the Treasury that we might turn the analysis we did for the “National Infrastructure Assessment” on energy efficiency and use that as a separate report, much as we had done for the water analysis that was produced for a report called “Preparing for a drier future”. Ultimately, the commission chose not to do that, but there would not have been any additional analysis. It would have just been presenting it at an early stage.

Q325 **Antoinette Sandbach:** Given that this Committee is doing this inquiry and report, would you be prepared to revisit it and give the Treasury a detailed report for the upcoming spending review, building on the work of this Committee?

Philip Graham: Unfortunately, we have to work within the remit that we have been given. The remit was to produce a “National Infrastructure Assessment”, which we did.



HOUSE OF COMMONS

Q326 **Antoinette Sandbach:** Are you prepared to consider it?

Philip Graham: It is not my job to consider it, unfortunately.

Q327 **Antoinette Sandbach:** Whose job would you say it is?

Philip Graham: If the Treasury, which set out remit, asked us to do such a report, we could do so. As it was, we were producing the "National Infrastructure Assessment", and we have published all of the advice we provided as part of that "National Infrastructure Assessment" in July last year. Had we published it as a separate report, there would not have been any additional information; it would just have been brought out a little earlier, as we did for the water elements of our work.

Antoinette Sandbach: At the end of this evidence session, perhaps you could take this away and address the concerns that are contained in it. Thank you.

Q328 **Anna Turley:** Hi, Philip. Going back to your report, you stated, "An immediate priority is the social rented sector". All the evidence we have had in this Committee shows that it is the private rented sector that is the least efficient and where there is the largest policy and investment gap, across the entirety of our housing sector. What was the thinking behind making the social rented sector the immediate priority?

Philip Graham: It did not say "the immediate priority"; it said "an immediate priority". We were quite clear in the way in which we wrote the recommendation that we think there needs to be action across all three sectors, one of which is the social rented sector. We thought that was where direct Government funding would be most appropriate and would have the strongest impact. We also said there needed to be a tightening of regulations in the private rented sector. We said the Government needed to up their game in the owner-occupier sector and, as your colleague says, develop and trial a range of mechanisms to drive up the pace of change.

We did not have scope within the organisation to fill that out. Other organisations that are more expert in this particular area might be better placed to suggest what they should be. We certainly did not say, "It should be social housing first and only after that other things should follow." The recommendation had those three bullets, and we sought to be clear that you need progress against all of those.

Q329 **Anna Turley:** That is fine, thank you. Going into the specific figures, as before, you mentioned £3.8 billion of public capital investment. Do you have any sense of how many insulation measures per week that would be? What would that tangibly look like?

Philip Graham: The calculation we had was that it would take you to about 3,500 measures per week in the social rented sector. Broadly speaking, we thought that programme would be sufficient to bring the social rented sector up to EPC C standards. That was considered to be in addition to the ECO funding that already exists, which is driving further



HOUSE OF COMMONS

improvement for fuel-poor and low-income houses, and the increase in installation of measures that you would expect to see.

Q330 **Anna Turley:** Would that be funded just by the Treasury? Is it purely from Government? Does it include bills?

Philip Graham: No, we are proposing that the £3.8 billion should be funded purely by the Treasury. That is direct Government funding.

Q331 **Anna Turley:** That is really helpful. Moving on slightly, could you say a bit more about what sort of incentives and minimum investment commitments you would like to see in the Government's action plan that is coming up, particularly to drive demand in the owner-occupier retrofit market?

Philip Graham: The short answer is, as has already been identified, that this is not a piece of work we have done in detail. We wanted to set a clear direction of travel for this through our report, and we wanted to set a clear indication of the pace of change that we wanted to see, but we did not have the scope to go through and do a full review of the range of measures and incentives.

Q332 **Anna Turley:** In your costings, there has not been any measurement of what your recommendations for Government to trial incentives for owner-occupier households would be. That is not included in your figures.

Philip Graham: We said the Government should look at low-cost financing; they should look at energy efficiency mortgages. We would very much support—we have been in discussion with the CCC—the types of measures that the CCC is proposing. We are broadly in the same place on this issue. We have not done a separate piece of work on our own to flesh that out in more detail.

Q333 **Mr Dhesi:** Philip, it is a pleasure to see you again. Indeed, thank you for your time last time, as the chief executive of the National Infrastructure Commission, to discuss why the western rail link to Heathrow should be a national infrastructure priority.

Getting back to today's agenda in terms of energy efficiency as a national infrastructure priority, how could the Government meet their targets for fuel-poor homes in England to reach EPC band C by 2030?

Philip Graham: Again, I have to say that this is not a question that we sought to answer as a commission. That is not the lens through which we approached this question. We approached the question through the lens of how the country can most cost-effectively achieve the zero-carbon energy sector that the climate change legislation requires.

I cannot provide a direct answer to that question. But, if the Government are to achieve their carbon reduction targets, it is clear to us that a very significant increase in the pace of provision of energy efficiency measures is needed. Given that you will be focusing a lot of additional direct funding on social housing, and because we continue to be supportive of



the ECO programme, we would expect that this would have a significant effect on tackling the lack of efficiency in fuel-poor households.

Q334 **Mr Dhesi:** In its last annual report, the Committee on Fuel Poverty said that the funding gap to meet the 2030 target was a huge £8.1 billion. As the NIC, you have recommended an extra £3.8 billion just for social housing. That is just to get to band C by 2030. Where should the rest of the investment come from, in your opinion?

Philip Graham: Again, I do not have a direct answer to that, but tightening regulations within the private rented sector should drive up the level of investment that is being made by the private sector. Again, we have been very supportive of—and we have built this into our calculations—the continuation of the ECO scheme. In addition to that, again, this is not a question we sought to answer, but there may be a case for other sources of Government funding from other areas specifically targeting fuel poverty. Given that we are the infrastructure commission and, in particular, given that we do not have a remit to look directly at housing, this was not a question we were able to answer.

Q335 **Vernon Coaker:** I am just trying to phrase my question slightly differently. Are you constrained by the remit you have from the Treasury in saying to the Government that energy efficiency should be a much greater priority than it is?

Philip Graham: I do not think so, because that is what we have said to Government in our “National Infrastructure Assessment”.

Q336 **Vernon Coaker:** From the “National Infrastructure Assessment” you have made, you are saying to the Government that in the future energy efficiency should be a major priority.

Philip Graham: We have said what we have said in our report. We have said that, if the Government are to achieve their carbon targets, which are set down in statute, in the most cost-effective way possible, they should be doing a lot more on energy efficiency, and in particular they should be providing funding for social housing, et cetera, to drive up the pace of implementation before 2030.

Q337 **Vernon Coaker:** So it should be a national infrastructure priority.

Philip Graham: “National infrastructure priority” is not a phrase we have ever used as an organisation, but, basically, we have made a set of recommendations to the Government.

Q338 **Vernon Coaker:** If that is not what you call it, if you are the infrastructure commission and you make it a priority, I do not know what else you would call it.

Philip Graham: Ultimately, we have made a recommendation that the Government need to do a lot more in this area. Exactly as I said to Drew, that is clearly something we think the Government should be treating as a priority.



HOUSE OF COMMONS

Q339 **Vernon Coaker:** The issue for us is that the BEIS Department is saying it is already treated as a priority.

Philip Graham: We are saying that they can say that, but they are not doing enough.

Q340 **Vernon Coaker:** Does it need to be more of a priority?

Philip Graham: It needs to be more of a priority, yes.

Q341 **Vernon Coaker:** Let us start with that. It needs to be more of a priority. Let us suppose the Government come back and say that. Do you expect them to say that? Do you expect them to take your side rather than the BEIS Department's?

Philip Graham: I do not know where they will come out. They have said they are going to respond to our assessment with a national infrastructure strategy to be published alongside the spending review. Behind the scenes, we are pushing them very hard to make sure that the response to the recommendations we are going to make is as positive as possible, but I cannot answer for the Government as to what their immediate thinking is.

Q342 **Vernon Coaker:** Here is the question, then. In answer to what Antoinette Sandbach was saying and your response, if I understood it rightly, Antoinette Sandbach was asking whether you were doing an energy efficiency report, which was recommended ahead of the spending review. Are you going to do that?

Philip Graham: No, we are not going to do a further energy efficiency report. We did a fairly significant piece of work on energy.

Q343 **Vernon Coaker:** That is not the same.

Philip Graham: I know.

Vernon Coaker: It is not a report.

Philip Graham: A decent chunk of the report that we have published, which is the one we are required to publish by our charter, covers energy efficiency. That has identified that energy efficiency should be more of a priority for the Government than it is. The discussion earlier that was being referred to was about the idea that we might simply have published the energy efficiency bit of that report as a separate document. Ultimately, the commission chose not to do that. Even if it had done so, there would not have been any additional work; it would just have been published slightly earlier and it might have had a slightly higher profile as a separate document. The members of the commission chose not to do that.

Q344 **Vernon Coaker:** This is the final question from me. Lots of the statements that have been made by the commission talk about the need for us not to generate unaffordable wish lists, and to operate according to the fiscal remit we have and the demands that are made. Does that not



HOUSE OF COMMONS

constrain you? In terms of energy efficiency and meeting the 21,000 measures that were talked about earlier as necessary to get us to a reasonable position by 2035, or whenever it was, would it not be your job to say, "Look, this is the fiscal remit at the moment; this is the envelope. Actually, as your commission that advises you on these matters, we are saying that you will not achieve that"? Is it your job to challenge the system, in other words? Does the remit constrain you in saying what you really want to?

Philip Graham: You would have to ask the members of the commission that, rather than me as the civil servant who runs its secretariat.

Q345 **Vernon Coaker:** Do you have a view on it?

Philip Graham: I have a balanced view. I am sorry. In some cases, there will be instances where the commission might well want to come out and say, "Okay, there is a clear point here where we think spending some money in excess of the remit that we have been given might deliver a particular benefit". Equally, if they are not simply going to make a splash in the media but they are going to have an impact and influence on Government, regularly playing against the rules they have been set would probably be quite counterproductive.

The fiscal remit is a constraint, but it is also of benefit. If we make recommendations within the context of that 1.2% and within the context of what the Government broadly consider to be an affordable long-term funding profile for Government, it is much harder for the Government to turn around and say no. We shall wait and see what happens. They have said they will respond with this national infrastructure strategy. It is quite hard for them to say, "We have chosen not to do this because it is unaffordable," when we have met the criteria and the remit they gave us for affordability.

Vernon Coaker: It is also there to challenge, is it not? Of course you do not want to make a ridiculous wish list, but it is there to challenge. It should go where the evidence goes.

Q346 **Chair:** Members have been slightly frustrated over the last half hour, Philip Graham.

Philip Graham: I am sorry.

Q347 **Chair:** You are an arm's length body created by the Government to provide advice and recommendations, and presumably to hold the Government to account for meeting the objectives they set for themselves. Is that right? Is that your role?

Philip Graham: That is. We hold the Government to account once the Government have said whether they are going to accept them. In relation to our recommendations on energy efficiency, the Government have not responded yet. It is quite hard to hold them to account when they have not said what they intend to do.



HOUSE OF COMMONS

Q348 **Chair:** To meet the Government's objectives, you need these 21,000 improvements being installed every week between now and the end of 2035. Is that correct?

Philip Graham: In our view, that is the best and most cost-effective way of meeting the decarbonisation objectives.

Chair: At the moment, it is 8,800 a week.

Philip Graham: Thereabouts, yes.

Chair: It is way off where it should be.

Philip Graham: Yes, and that is exactly why we have said the Government need to do more in our report.

Q349 **Chair:** Yes. If I was the Government, I would not be running scared of the National Infrastructure Commission and you, Philip Graham, because you have not really, until I just pushed you there, made that case. It is not that they are a few installations a week off. Every week, there are 12,000 fewer installations than there should be, so that is 50,000 fewer installations per month. Every year, there are 600,000 fewer installations than there should be. By anybody's view on the numbers, that is pretty appalling, is it not? They are pretty far off track. That is happening not just in one year but every single year.

Philip Graham: Yes, and that is why we have made the recommendation. The way in which this system works is that we make recommendations through the reports we have made, and the Government have an obligation to reply to those and set out what they will do.

Q350 **Chair:** When did you make those recommendations?

Philip Graham: We made those recommendations in July last year. The Government said, at the Budget, that they would respond to our assessment, not simply to our recommendations about energy efficiency but our overarching "National Infrastructure Assessment".

Chair: When are you expecting those responses?

Philip Graham: They said they would reply, as I said earlier, in the national infrastructure strategy to be published alongside the spending review.

Chair: So it will be a year later.

Philip Graham: Yes.

Q351 **Chair:** Is that a good timeframe for responding? If we publish a Select Committee report, the Government have to respond within six weeks to it.

Philip Graham: Unfortunately, that is the system that has been set out in the charter that was put in place when we were established, that the



HOUSE OF COMMONS

Government would respond to our reports within a year. It has to be said that the "National Infrastructure Assessment" is a very comprehensive document, spanning the totality of the nation's infrastructure and looking 30 years ahead, so responding within six weeks would be rather difficult in that instance.

Q352 **Chair:** It is all well and good having a plan, but the plan on energy efficiency seems to be way off track. Unless we do something quite quickly, we are not going to meet our targets, as Lord Deben said earlier, on climate change.

Philip Graham: We are entirely supportive of the work that the Committee on Climate Change does; we engage with the CCC. In this instance, our remit requires us to produce a "National Infrastructure Assessment". As part of that "National Infrastructure Assessment", we have made a set of recommendations around energy efficiency and increasing the pace of energy efficiency. The Government then have to respond to that. When they do so, we will hold the Government to account for whether they are doing what they have said they will do. That is the process that was put together when we were established, and that is the framework within which we work.

Q353 **Chair:** When you said to Vernon Coaker that energy efficiency should be more of a priority, what did you mean by "more of a priority"? What do you want to see?

Philip Graham: We want to see exactly the recommendation that we have set out in our "National Infrastructure Assessment". That is what we will be looking for the Government to implement when they respond.

Q354 **Chair:** Is that the 21,000 installations?

Philip Graham: It is 21,000 installations a month, including funding for energy efficiency improvements in social housing, tighter regulation—

Q355 **Chair:** It is 21,000 a week, not a month.

Philip Graham: Sorry, it is per week. It includes tighter regulation in the private rented sector and trialling a range of measures to drive forward improvements in the owner-occupier sector.

Q356 **Chair:** What should the Government be doing to ensure that those targets are met?

Philip Graham: They should be providing funding in the social housing sector, tightening regulations in the private rented sector and trialling measures in the owner-occupier sector. In some ways, they are moving in the right direction. Some of the consultations they have launched are moving in the right direction; the regulatory changes they have announced for the private rented sector are moving in the right direction.

They have launched two consultations on market measures, so building a market for energy efficiency, and on changes to the EPC code, which we



think are very important. The Government have yet to respond to either consultation to say what they are going to do, so we are keeping an eye on this. Our formal role in holding the Government to account kicks off at the point at which the Government respond to our reports, and we have to operate within the framework that has been set out for us.

Chair: Thank you for giving evidence to us this morning, Philip Graham.

Philip Graham: Thank you.

Examination of Witnesses

Witnesses: Jenny Holland, Sarah Kostense-Winterton, Tom Thackray and Tatiana Bosteels.

Chair: Thank you to the four of you for coming to give evidence to us this morning, the third of our panels today on energy efficiency. Where you agree with each other, do not feel the need to repeat what other people have said. If you say, "I totally agree with Sarah or Tatiana"—or whoever—that will be more than sufficient.

Q357 **Drew Hendry:** Why has there been such limited progress in improving the energy efficiency of commercial buildings, in your opinion?

Jenny Holland: I think it is widely acknowledged that, in the absence of policy interventions, there are significant barriers in the commercial sector that mean most businesses will not actually invest in energy efficiency, even though it is cost effective. Those barriers are well documented. Energy costs are a very small percentage of overall costs. There is a lack of awareness and experience of how to deal with energy efficiency. Energy efficiency is often not aligned with a business's strategic aims and objectives. Then there is the massive problem of the landlord tenant split, where landlords do not have to pay the bills, so they are not incentivised to invest in energy efficiency. The payback periods on investments are such that they deter tenants.

We need a comprehensive package of policies, and, unfortunately, we do not have that either. There are other systemic problems, like the well-documented performance gap, whereby buildings often do not perform to the level that compliance with building regs would imply. That needs treating, but we have a range of policies that is piecemeal and incomplete, and has suffered from a great deal of chopping and changing down the years. We need to do more to make that set of policies comprehensive and we need to tackle enforcement. That is a massive issue with things like the minimum energy standard for privately rented commercial buildings.

Q358 **Drew Hendry:** You have said there that energy efficiency is not a strategic priority for many businesses or real estate investors. Is that something the whole panel will agree with?



Sarah Kostense-Winterton: We have to look at commercial, and there are lots of different types of businesses. SMEs, for instance, need a different type of approach compared with larger businesses. Often, there is a lack of salience within SME businesses, so it is to encourage them. As Jenny said, on the payback time, they do not see the benefit of that. The benefits of energy efficiency are a longer-term target.

Q359 **Drew Hendry:** Do you believe businesses have the access to the information they need on energy efficiency technology?

Sarah Kostense-Winterton: Among the senior decision-makers in these businesses, energy efficiency is not on their radar. Often, it is squashed down further within businesses. That needs to be raised up, so it is around the boardroom tables.

Tom Thackray: Climate change and sustainability in general is probably not prominent enough around the boardroom table. The IPCC report last year and the renewed emphasis on avoiding temperature change over 1.5 degrees centigrade should be a catalyst now to have a more meaningful discussion with businesses and make sure that it raises its head on the boardroom table.

Tatiana Bosteels: I am going to be focusing more on the financing of energy efficiency, which is one of the key elements preventing the implementation of more measures, even though they are cost effective. We have been doing a lot of work as the investment industry over the last six to seven years, through the Energy Efficiency Financial Institutions Group, which pulls together about 100 organisations related to the financial sectors across the EU, including a lot from the UK. We put together a report back in 2015, but which is still very relevant, which emphasises some of those reasons and the answers to that.

In a nutshell, we need to look at energy efficiency finance as a two-sided coin. It is how you develop demand for energy efficiency finance, which is to develop a pipeline of projects that are investment grade—that is, ready for investors like us to then provide a supply of finance. There are a number of ways of doing that. In terms of the demand for finance, there is a clear need to better develop those projects that are pushed by the UKGBC, by the insulation industry and others, or by the local authorities, by providing technical assistance. We see that the perceived risk of energy efficiency finance is much higher than it is in real terms. We need to better translate the perceived risk to the language of financial institutions.

Q360 **Drew Hendry:** If you were able to get that message across, to change the attitudes strategically and so forth, what opportunities would greater energy efficiency unlock for commercial buildings?

Jenny Holland: They are many and various. Commercial buildings contribute about 6% of our greenhouse gas emissions, so the obvious opportunity is to reduce our greenhouse gas emissions and put us on



HOUSE OF COMMONS

track to meet our carbon budgets. There are all sorts of attendant benefits. It would stimulate the UK's burgeoning energy efficiency market, help us to get into export opportunities, help create tens of thousands of jobs. We are at an uncertain time in our national history at the moment. It would enhance business competitiveness and reduce risk. It would ease the burden on the National Grid, help offset the need for expensive new energy generation. Finally, it is not often remarked upon, but there is growing evidence that better-performing buildings can improve worker productivity, mental cognition and a general sense of well-being.

Q361 **Drew Hendry:** Do you have anything to add to that?

Tom Thackray: Centrica has done some analysis, which takes energy efficiency alongside optimisation and onsite generation. It has estimated that there are £500 million worth of savings in the industrial sector alone and £300 million worth of savings in the hospitality and leisure sector, so real money that could be invested elsewhere.

Tatiana Bosteels: We have found, through the EU Energy Efficiency Financial Institutions Group and the further work we did among the G20, the Energy Efficiency Finance Taskforce, which I will share with you, that it will present a major investment opportunity. Climate change is clearly a major challenge. We will have to invest in a just climate transition, so it presents an innovation opportunity but also a new market for growth, which we are very interested in.

We tried to earmark how much investment had been done in energy efficiency globally. We have done that with the G20 and with the European group, and we came up with a figure of £220 billion in 2017. In the EU, building sectors accounted for about 80% of that. It gives a fantastic opportunity in the UK to develop an innovative sector where, in terms of institutional investors and growth opportunity, we could then tap in. As I said, in order to unlock that, and it is a significant scale we are speaking about, we need to match the supply of finance or the opportunity for finance with the investment grade pipeline of projects and aggregation of projects to match the two sources and make it happen in reality.

Q362 **Drew Hendry:** Very briefly, what about you, Sarah?

Sarah Kostense-Winterton: I will keep it as brief as possible. There are three main areas. There is the strength of Government policy in this area. We do not have that at the moment, pure and simple. We need to have mandated action driving consumer demand for commercial energy efficiency, and domestic. It has to all go together. As businesses, we are looking at the digitalisation of this area. A business owner's ability to track energy use in real time is so important, so it connects that business owner.



HOUSE OF COMMONS

I know Jenny referred to real performance of their buildings. If people are getting the real performance, so it is not just modelled but is actually what is happening within their building, there could be drivers, or the stick and the carrot, to ensure that happens. I will refer to whispers within the media talking about 5% retention on new home sales until the snagging list is sorted out, something that would encompass both domestic and non-domestic. This could include a design target within commercial buildings.

Q363 Mark Pawsey: Very quickly, we have heard from a number of our witnesses that energy efficiency is not a priority, but for many businesses energy is quite a substantial cost. We already hear from UK businesses that they are paying more for their energy than their international competitors. If you wanted to make this a greater priority, if the price of energy went up appreciably, businesses would make it more of a priority, at a cost of their international competitiveness. What would you like to see happen to energy costs?

Sarah Kostense-Winterton: Basically, it is for energy costs to come down. However, there have to be very clear drivers from Government in this area.

Q364 Mark Pawsey: If energy costs came down, there would be less of a priority on energy efficiency, would there not?

Sarah Kostense-Winterton: No, I would not say so. There is a bigger problem. We are focusing on one area here. We have to look at the bigger picture and how we are approaching this. What are we doing to ensure we have buildings that are energy efficient for the future? We have to look at how we drive that holistically.

Q365 Mark Pawsey: Sarah, you also said that there is a difference between SMEs and larger businesses. Energy can make up a higher proportion of the costs of a smaller business, so why would smaller businesses not have the focus on this?

Sarah Kostense-Winterton: It is actually to ensure they have that connection. At the moment they do not. We have the MEES at the moment, the minimum energy efficiency standard, and how that is working. You need to have staggered targets for these businesses. SMEs need to be able to plan much further ahead so they get those benefits. For instance, in Scotland, they are looking at that, which they stagger. We have EPC E by 2022, then to D in 2025, and then to C in 2030. It is so those businesses, those small businesses that are the backbone of the UK, can respond to that.

Q366 Mark Pawsey: Are smaller businesses not more often in older premises, so the proportion of their costs on energy is much greater?

Sarah Kostense-Winterton: There is a huge variety. This is the problem with the area, yes.



Tatiana Bosteels: Fundamentally, on commercial buildings specifically, we have found—and I have made this controversial statement a number of times—we need to kill the energy finance payback purely on energy returns. Where do we look for value in energy efficiency within our investment and as part of this group of investors? It is much more in the rental you can get from your buildings. Are you developing a building that has a characteristic that is in demand by occupiers, so you will get a higher rent? What is the value of your building that you are expecting at the end of your holding period in order to gain capital returns?

It means we need to think much broader. As was said, energy costs are relatively small in commercial buildings and in a number of companies. Unfortunately, we have seen real inelasticity of response to energy prices. When, seven years ago, we were at oil prices that were well over the \$100 per barrel, we did not see such a surge in energy efficiency improvement. We have been able to say, if you can demonstrate those multiple benefits, including the financial returns to investors, in terms of rent and capital value and capital appreciation, you can really unlock the potential.

One of the biggest problems though, as we have seen in those studies, is that the majority of today's investment in energy efficiency is actually invisible. It is made by businesses as part of their investments in upgrades of their industrial facilities, or by companies like us as part of our planned and preventive maintenance, our refurbishments, our new development.

We do not earmark a specific amount that goes towards energy efficiency, so trying to ascertain how many measures have been implemented is really difficult. We have made a request, and we have pushed that both through the EU and through the UK Green Finance Taskforce, that much more should be done in terms of green-tagging what financial institutions are already funding as energy efficiency, to better measure and therefore better understand how to increase the proportion of energy efficiency finance that exists today, although it is not seen as energy efficiency finance.

Q367 **Mr Dhesi:** Is the Government target of a 20% reduction in business energy use by 2030 ambitious enough?

Jenny Holland: It is ambitious enough, but the real problem, as I am sure you heard from Lord Deben this morning—I was not here for that part of the session—is that we do not have the concrete and specific policies set out, laid before us, whereby the Government say they are going to actually meet that target.

Q368 **Mr Dhesi:** Tatiana, you were shaking your head. You do not think it is ambitious enough.

Tatiana Bosteels: I am also part of the board of the Institutional Investors Group on Climate Change, and I chair the Investment



Commission of the UNEP Finance Initiative. As far as the Institutional Investors Group on Climate Change is concerned, we have been very clear that the 20% target by 2030 is not enough. We need to have a very clear and strong signal sent to the investment industry as to what the level of ambition needs to be in order to unlock the investment that is required to achieve our statutory target of decarbonisation by 2050. In fact, we believe much more could be done. We have called, at the EU level, for a 30% reduction target, but we believe much more can be done. We also should have clearer targets on energy efficiency specifically set by 2030 and 2040, to give us those signposts and more clarity as to where we should aim to be, in terms of financial flows.

Q369 **Mr Dhesi:** Sarah, is enough progress being made to meet this target?

Sarah Kostense-Winterton: No. We have a target but no idea how we are going to get there. Having those targets staggered, 2025, 2030, et cetera, would mirror the clean growth strategy targets for domestic. As I have referred to before, it is important to look at domestic and non-domestic together, as a programme, because there are benefits in having the same approach, even if it is commercial. We need to be more ambitious.

Q370 **Mr Dhesi:** Tom, in your role within the CBI, is there appetite within business for targets to be strengthened?

Tom Thackray: Honestly, the majority of businesses will not be aware of the targets, and they probably will not be aware of the targets that should sit beneath that headline target. We need to socialise the importance of the issue before we assess whether the target is strong enough at the moment. The businesses we talk to are of the view that the current target is quite stretching, and we are not on course to meet that target, which is important to say.

As for the targets that sit beneath it, for example the minimum energy efficiency standard, the feedback we have had from building owners is that that is quite easily achievable at the moment. It is not stretching them hard enough. We could push people a lot further than they are currently being pushed by the regulation.

Q371 **Mr Dhesi:** That is quite a sad state of affairs. Jenny, what do you think? What targets should the Government be setting?

Jenny Holland: One thing our members are tremendously supportive of is that the minimum energy efficiency standard for privately rented commercial buildings should be strengthened, at least to EPC band C by 2030. We are also supportive of the target that was recommended by the Green Finance Taskforce last year, which is that all commercial buildings need to be band B by 2035. Our members say to us that the minimum energy efficiency standard for privately rented commercial buildings has been the single most transformative policy in this space. Especially the larger building owners are already taking steps proactively to improve their buildings, because they do not want to be left with stranded assets,



essentially. There are reputational risks also associated with that. Our members are very supportive of moving forward on those fronts, but they want a clear trajectory. As ever, they want a clear trajectory to be set out now, swiftly, with clear milestones along the way, so they can plan and make the relevant investment decisions.

Q372 Anna Turley: I wanted to ask you a bit about the current regulatory framework for commercial buildings in particular. Why do you think it is failing and not driving enough energy efficiency improvements?

Tatiana Bosteels: In support of what was said before, so I will not repeat it, we have seen good progress in the regulatory framework, but there are some gaps. One of them, which is very clear and has been pointed out by the UK Green Building Council, by the Better Buildings Partnership, is that there is a gap between the design performance of buildings, which is the basis of an energy performance certificate, and the operational performance of buildings. As the UK Green Finance Taskforce, as part of the energy performance of buildings directive and the energy efficiency directive, which was finalised last year at EU level, we have been calling for targeting the operational aspect.

One of the demands we have made, and it is in the UK Green Finance Taskforce as well, is to develop a building passport. That should be an electronic building passport that accounts for both the design and the operational performance of buildings. You could then have ambitions. We had a carbon-reduction commitment. I say we had, because it is still running, but, unfortunately from our perspective, it is coming to an end. We took 10 years to develop what was a very controversial policy in the UK. When it is working well it is bringing in revenues to the Treasury, which could be earmarked for energy efficiency in buildings. It has been decided to cancel it at a time when the systems were working well, after all the teething problems.

We had the Green Deal. If we look at similar experiences abroad, in California in the US, the PACE programme, which is a similar programme of untaxed repayment of energy efficiency finance, has had a fantastic achievement. I will check notes just to be sure. We have seen the PACE programme deliver \$5.9 billion of energy efficiency finance.

What was the difference between the PACE programme and the Green Deal? It was that the financing terms that were given by PACE, and which are given today, are better than commercial banks' terms, while with the Green Deal we have not yet managed to offer some kind of support from the UK Government that ensures the financing terms are lower than commercial banks' terms today. I recognise it is a very low interest rate environment, but we are of the view that the Green Deal should be revived or some kind of unbilled, untaxed financing scheme should be reassessed as an existing tool.

My final point is that the role Government have to play, in terms of unlocking the scale of the finance that is needed and in terms of



regulation, is about greening the financial system and supporting the development and scaling-up of existing energy efficiency financial mechanisms, such as green bonds, which are very popular, as you know, but also green mortgages. There has been some really good work done in the EU, but also from Lloyds in the UK, about how to promote more.

Fundamentally, we need to think big. We know that we had a UK Green Investment Bank. In the context of a just climate transition, we are looking at having to develop skills and new job creation in regions that are potentially more at risk than others. Should we be looking at an investment institution, supported by the Government, that could leverage private sector money at the same time as providing technical assistance and project development assistance to develop the pipeline of projects, in order to unlock this scaling of finance and the matching of projects with finance?

We are calling for reflection. Do we need some kind of climate investment bank among those kinds of instruments? It has been proven in Germany with KfW, its investment bank, which has funded the most successful European renovation project, based on specific renovation targets. Should we have a similar programme building on existing skills? The UK was the very first country in Europe to have a green investment bank. How do we revive that spirit?

Q373 Anna Turley: Thank you. That is really helpful. Aside from the finance, which is really important, I would like to talk a bit about the regulation and the regulatory framework. Jenny, could you tell us your view on what regulatory reform needs to happen? Should we be strengthening building regulations for new commercial buildings? What do you think of the Energy Savings Opportunity Scheme? What is the framework? Is it working?

Jenny Holland: I will try to keep this brief, although I could go on for an exceedingly long time. Before I deal with those, the other big thing as far as we are concerned, in terms of what is holding back the effectiveness of regulation, is enforcement or, to be more precise, the lack of it. That is the case whether we are looking at building regulations, at the minimum energy efficiency standard, or indeed at the EPC regime itself. In terms of building regulations, you have building control officers, who are extraordinarily under-resourced, who do not have time to bring themselves up to speed with the latest training opportunities. They often do not have the resource or expertise to bring prosecutions. Enforcement is a huge issue.

In terms of what I would like to see, absolutely, UKGBC has advocated a move to mandatory operational ratings for a very long time. You probably heard a lot about the Australian NABERS scheme, which has shown that mandatory operational ratings can radically drive down energy use. New office buildings in Melbourne are currently operating at about three times the level of energy efficiency as the best performing new buildings in



HOUSE OF COMMONS

London, and at about six times the level of performance compared with average new buildings. That is absolutely crucial.

In terms of minimum standards being increased, absolutely, I have talked about it with the MEES. In terms of building regulations, in the review that is currently ongoing of building regs for 2020, we want to see the introduction of a standard for all buildings, not just domestic buildings, that broadly mirrors what we were expecting to see by way of the zero-carbon homes standard in 2016, before it was summarily scrapped. We want that to be a modest but definite step along the way to all new buildings being net zero carbon in operation by 2030, with strongly indicated milestones along the way set out as soon as possible.

Q374 **Peter Kyle:** Sarah, who should pay for energy efficiency in commercial buildings?

Sarah Kostense-Winterton: It needs to be a broad range of options. You have to have the stick and carrot situation. There has to be some investment from industry, but for that to happen, to unleash R&D within the industry, you need certainty, strong messages and strong policy from Government. A specific example is the future home standard. It is very interesting that that was announced, but with nothing behind it at this stage. What do my members say? They go, "We are not going to start unleashing our money for R&D until we actually know what that means within our businesses". It is having that certainty.

I will bring up the B word in this environment to say we have the opportunity now to really push forward with this area, to mirror and go further within energy efficiency. If you have that strong message for businesses now, they will invest. They will produce things and develop methods for measuring real performance of our buildings so we stamp out the performance gap.

Q375 **Peter Kyle:** Are you saying the EU is holding back on energy efficiency?

Sarah Kostense-Winterton: No, not holding back. There is an opportunity. This area is not a political area. Everyone can agree on it, so we should be charging ahead when we cannot charge ahead in other areas.

Q376 **Peter Kyle:** I see, okay. Tom, I wonder if you could let us know why current fiscal policies are not driving greater change when it comes to energy efficiency in the corporate sector.

Tom Thackray: If you look at the scale of fiscal policy compared with what we spend on decarbonisation in other parts of policy, it is pretty small, to be honest.

Q377 **Peter Kyle:** Business only acts when there is commercial interest in it, not doing the right thing.

Tom Thackray: No. I mean, there is a self-interest in becoming more energy efficient, because you reduce your energy bills.



Q378 **Peter Kyle:** But not enough to drive change.

Tom Thackray: I think we have touched on it quite a lot. It is not a substantial enough proportion of total cost to get them to act all the time. Particularly among the SME community, there are not huge amounts of awareness of what investment is the right investment to make. Then in larger companies it is not a very well-talked about issue around the boardroom table.

Q379 **Peter Kyle:** You accept it is financial incentive that will drive the change ultimately. There are other behaviours in the private sector that recently have driven profound changes very rapidly. We are talking about behaviours in the workplace, the Me Too movement and some of the other things. For some reason, the prospect of climate change is not driving, in itself, the change that is needed.

Tom Thackray: We need to find ways to make it more real at the individual company level and to consumers, being one of the key constituencies that are going to drive that change. The plastics movement, for example, is very much a consumer-led movement. I would say, though, that I do not think we are talking about huge sums of money in terms of the uplift. I think the majority of investment is going to be made by the private sector, rather than the public sector, but there are not the regulatory conditions at the moment that give businesses the confidence to invest in these types of areas.

Q380 **Peter Kyle:** Is anybody able to give us an example of what kind of fiscal measure could drive the change we need to see?

Tom Thackray: A good example would be lowering or reduced VAT for energy-efficient products. It is something that has worked well in other countries. A link between business rates and energy efficiency improvements is another area we have been exploring.

Jenny Holland: I was going to be a bit controversial on the question of fiscal incentives.

Peter Kyle: We like controversial. That is fine.

Jenny Holland: I would say we do not have any fiscal incentives driving commercial energy efficiency. The climate change levy is simply a tax borne by businesses. Climate change agreements have worked to improve energy performance in the energy intensive sector. Tatiana has referred to the carbon reduction commitment, or the CRC Energy Efficiency Scheme, as it became snazzily entitled. That was driving change, but one of the unfortunate things was that, very quickly, the revenue recycling element was removed, which removed any reputational driver. Not long after that, performance league tables were scrapped as well. We did have enhanced capital allowances for companies making energy-saving investments, but they were unexpectedly scrapped—unexpectedly to BEIS as well, I can say—in Budget 2018. We felt that scrapping those before a comprehensive alternative suite of policies was



HOUSE OF COMMONS

put in place sent out a very negative message about what priority Government ascribe to business energy efficiency.

In terms of what we can do, Tom talked about variable business rates dependent on the energy performance of businesses. We very much support those. We would like to see a clear trajectory set for ramping up climate change levy rates over time, which we think will drive change. I know this is anathema to the Treasury, but we would like to see some ring-fencing of the additional climate change levy revenues to provide interest-free loans to businesses investing in energy efficiency.

Peter Kyle: Thank you, lots of ideas.

Tatiana Bosteels: I fully agree with what Jenny has said. One key regulatory element that has changed behaviour in institutional investors has been the definition of fiduciary duty. At both the UK and the EU level, it now makes specific reference to the responsibility, the duty, of trustees to look at long-term risk, including environment and climate. In answer to your question, the fiscal, which there is very little of, as we have been hearing, is important, as well as a balance with other regulatory frameworks, which puts responsibility on certain actors in society to act in scale with the challenge we are facing.

Q381 **Antoinette Sandbach:** Sarah, what steps will need to be taken to grow the supply chain to the necessary capacity to deliver a national programme of energy efficiency upgrades?

Sarah Kostense-Winterton: Ultimately, it is to have those specific targets, the certainty from Government. We have the top-line messages, the future homes standard, halving energy use in the industrial strategy grand challenge, but there is no indication of how we are going to get there. We are doing all we can, with hesitation, to scale up. There are other things the industry is doing, as in Each Home Counts. That is all to do with quality. We are trying to do all we can, but without the certainty from Government, the right messages, the strong messages and how we are going to do it, that does not lead to that investment. We are doing all we can to respond at this stage.

Q382 **Antoinette Sandbach:** Do you agree with that, Tom?

Tom Thackray: Yes, 100%.

Q383 **Antoinette Sandbach:** Would anyone like to add anything?

Jenny Holland: I completely agree with Sarah. It is worth adding that business has been bruised, very badly bruised, in the past by a stop-start policy environment, insulation rates ramping up hugely while we still had the CERT scheme and then collapsing after that as we moved to ECO. Business is going to be wary without the very specific indications of policy direction. It is going to be wary about scaling up to any significant degree.



HOUSE OF COMMONS

Tatiana Bosteels: I agree there is going to be a crucial challenge in the UK to ramp up the skills. As I mentioned in the context of a just climate transition, we are going to have to support reskilling. We are going to have to create new skills. It is an opportunity for the UK to emerge as a leader in green technologies and to have that ability to export those technologies as well. As I mentioned, the Government goal will also be about providing technical expertise and supporting education. They will have to start with the basics.

Q384 **Antoinette Sandbach:** The Government have invited sector deal bids. Are people looking at this area, energy efficiency, as a potential sector deal bid, where you could leverage in support from the Government that you are arguing for? Actually, that mechanism is there already.

Tatiana Bosteels: Yes. As we said, one of the big issues is that investment managers and to some extent—but contradict me if I am wrong—businesses do not see energy efficiency as a standalone, as an asset class, as a sector. It is about how you present it to them. They do not feel they match the profile that is being requested because this is not the way they would define it, so there is a dialogue that needs to take place to establish that understanding.

Q385 **Antoinette Sandbach:** Why can business not have that dialogue, instead of Government having to direct it?

Tom Thackray: The means of engagement with the sector deal process have not always been obvious for businesses. It is very clear within the automotive sector. There is a council, which meets regularly, and you are in with the Minister. For, I suppose, the less coherent sectors, how you engage with the Department is not so clear-cut.

Q386 **Vernon Coaker:** Can I just ask a question? I promised to raise this issue in Parliament. I had two pupils from Carlton le Willows Academy in Nottingham come to my surgery to deliver a petition and a letter about climate change. I have promised them that I am going to raise these issues wherever I have the chance and the opportunity, because the whole school spent a couple of hours debating and discussing this issue. One of the frustrations they had, in the few minutes I had with them—I am obviously going to go back to Carlton le Willows Academy and speak to them—was that it just takes so long for everything to happen. Can we not get a move on? We have been talking about this for years.

If there was one thing that each of you were going to say would help, what would cause this to move on so we are not, in five or 10 years' time—whoever has replaced you or us, or me—discussing the same thing? What is the thing that will drive it on?

Jenny Holland: It is getting on and doing it. I was giving evidence to the Science and Technology Committee a couple of weeks ago on domestic energy efficiency. We were talking about stamp duty incentives. The first time I commissioned a report on stamp duty incentives was in 2002 and we are still talking about it.



HOUSE OF COMMONS

Vernon Coaker: This is what they are saying.

Jenny Holland: We have had the odd little carrot along the way dangled in front of us, by successive Governments, that they were about to launch a stamp duty incentive, and it has never happened. Our frustrations are often as great as those of your pupils.

Sarah Kostense-Winterton: This issue is like an echo chamber. The same things keep going round and round and there is no take-up. We have to have very strong leadership from Government, but we need to see the wider benefits as well. This is about quality buildings, safe buildings, health and well-being, and the wider benefits we can bring. This is not just about energy efficiency. We can save the National Health Service money in this area, keeping people out of hospitals. It is the realisation that we can actually deliver and we can deliver those benefits cross-departmental.

Tatiana Bosteels: A number of us for the last 10 or 20 years have done our homework to bring the issue forward, and now we need to think big. What has made the biggest change in the last two to three years has been Mark Carney stating that climate change represented a risk to financial stability, so it is the role of the financial regulators. It has been the change in fiduciary duty and it has been the societal change. We have seen the students on the street. Today, Mary Robinson, who is the chair of the Elders, is giving a speech where she will call on this realisation, to ask, "What is our social licence to operate if we are not contributing to a just climate transition?"

I think those three elements are going to make a big change, but we need to think outside the box. It is not about tinkering with the ECO, the ESOS or the CRC. We have a fundamental reallocation of capital to be done in the next 12 to 20 years and the decision needs to be made by us today, on behalf of those children.

Tom Thackray: This House has a very big role to play. It has been very difficult to get airtime for these kinds of issues around the Brexit issue for a little while now. To be glass half full about it, there is a window of opportunity now, with the IPCC report, with the Committee on Climate Change giving its views in the next couple of months. It really needs this House to grab those recommendations and make sure they are followed through on. Sometimes, there are parts of Government that would suggest business is not up for this change. I can say unequivocally that business is up for the change. We do not want to be used as a defence mechanism for not going through with it.

Chair: Thank you very much, all four of you. I am sure that Vernon's academy school will be very pleased by those answers and will, in years to come, vote for Vernon Coaker. Thank you very much for your time. It has been a very informative session this morning. Thank you.