

# Environmental Audit Committee

## Oral evidence: Energy Efficiency of Existing Homes, HC 346

Thursday 15 October 2020

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Members present: Philip Dunne (Chair); Duncan Baker; Feryal Clark, Barry Gardiner; Ian Levy; Marco Longhi; Caroline Lucas; Cherilyn Mackrory; Jerome Mayhew; Dr Matthew Offord; Alex Sobel.

Questions 1 to 76

### Witnesses

[I](#): Jenny Hill, Head of Buildings and International Action, Committee on Climate Change; Simon Bittlestone, Audit Manager, National Audit Office; and Katie Black, Director of Policy, National Infrastructure Commission.

[II](#): Sarah Kostense-Winterton, Chair, Energy Efficiency Infrastructure Group; Michael Lewis, Chief Executive Officer, E.ON; Jenny Holland, Public Affairs and Policy Specialist, UK Green Building Council; and Pedro Guertler, Programme Leader, E3G.



## Examination of Witnesses

Witnesses: Jenny Hill, Simon Bittlestone and Katie Black.

**Chair:** Welcome to the Environmental Audit Committee. This is the first session of our new inquiry into the energy efficiency of existing homes. We are very pleased to have two panels of expert witnesses today. We have had 115 submissions of written evidence since we launched this inquiry in May. We know that one of the key challenges in meeting net zero Britain is getting the existing housing stock in this country into a fit state to be energy efficient and not waste energy through heat loss through the walls, the ceilings, the roofs, and the floors. We have panels today and in coming weeks until we conclude the inquiry before, we hope, we rise for Christmas, providing recommendations to the Government as they come to terms with their Heat and Building Strategy and make their plans to bring this about.

I am very pleased to welcome our first panel and I would like each of you to tell us what your role is in your organisation. Jenny Hill is from the Committee on Climate Change. Good morning, Jenny.

**Jenny Hill:** I head up the Buildings team and also the International Action team at the CCC.

**Chair:** Simon Bittlestone from the National Audit Office.

**Simon Bittlestone:** I am the Audit Manager at the National Audit Office. I do value for money studies on energy and climate change policies. I reported a few years ago on the Green Deal and Energy Company Obligation schemes.

**Chair:** Katie Black, from the National Infrastructure Commission.

**Katie Black:** I am one of the Directors of Policy at the National Infrastructure Commission.

Q1 **Chair:** Excellent. As I have already said, energy efficiency is a key challenge for Government. Jenny, could you set the scene for our inquiry today by giving us a sense of the scale of that challenge and what contribution improving energy efficiency can make to the overall challenge to achieve net zero by 2050?

**Jenny Hill:** I can talk first a bit about why energy efficiency is so critical for meeting net zero. Then I can pick up on what we see as the key challenges.

The headline here is that energy efficiency is the cornerstone of the buildings decarbonisation policy. It is absolutely essential for two reasons: first, because of the very significant benefits it delivers and, secondly, because it can help prepare the stock for the wholesale shift away from fossil fuel heating to low-carbon forms of heating.



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The clear benefits that we see are cutting carbon but doing that alongside cutting energy bills, improving levels of comfort, and, critically, delivering significant health outcomes. The striking figure there is that the estimated current cost to the NHS in England alone from poor quality housing is around £2 billion a year.

The impact energy efficiency can have on energy bills is best illustrated by looking backwards. In our 2017 energy prices and bills assessment, we stated that gas and electricity use had been cut by 23% and 17% respectively since 2008 and that that had saved a typical household energy bill £290 a year. What that means, essentially, is that we have more than offset the increases in costs from rising network costs and also the smaller increase from low-carbon policy, so bills are about £115 lower in real terms since the Climate Change Act was introduced in 2008.

I also mentioned that we see energy efficiency as critical for the transition to low-carbon forms of heating in achieving net zero and this is essentially twofold. Again, it is very much about keeping costs down. As we know, many low-carbon heat systems are more expensive. Today, I am at liberty to share with you a preview of some of the analysis that we will be publishing in a few months' time as part of our Sixth Carbon Budget advice to Government. This is based on modelling that we have been doing over the past year.

We have been developing a fully costed pathway to achieving net zero across the economy and, in my buildings team, for buildings. We see a striking result coming through. We think that by upgrading the whole of the housing stock over the next 10 to 15 years, we can not only offset the costs of low-carbon heating but we may well see lower energy bills in perpetuity from that point forward. I wanted to share that result with you because I think it is quite striking.

**Q2 Chair:** You focused very much on the running costs of housing for individuals rather than the global implications of getting the country to net zero. While it is very welcome that renewable heating costs will come down once installation has gone in, do you have an estimate of what the capital cost will be to achieve—I think you said within 10 to 15 years—getting the whole housing stock of the country up to a suitable rating? Have you made any estimate of the capital costs of doing it?

**Jenny Hill:** Absolutely. When we look at the projected investment costs through to 2035 for this widespread energy efficiency programme, we believe we will see total costs in the order of £45 billion. That is within the range, and in fact to the lower end of the range, of the cost estimates published by BEIS for achieving the EPC C standard. They put the range on that as between £35 billion and £65 billion, so £45 billion is within that range.

**Q3 Chair:** I think we will be getting into the detail of that a bit later. Thank you.



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I will ask Katie Black to give her view on some of the challenges of achieving this kind of target. I believe that of the 29 million existing dwellings in the country, 19 million are below Energy Performance Certificate rating C, so that is 19 million properties, with people living in them, to be upgraded over the next 10 to 15 years.

**Katie Black:** The National Infrastructure Commission looked at energy efficiency in the context of a piece of work we did a couple of years ago, the National Infrastructure Assessment. It is worth saying that this piece of work was done in the context of 80% targets rather than a net zero target, which may change the findings slightly. We made a recommendation to Government based on our analysis, which looked at the most cost effective way to decarbonise. That was that Government needed to ramp up the rate that energy efficiency improvements were taking place across the building and housing stocks in the UK.

We looked more specifically at three different types of housing. We felt that Government needed to start with the social-rented sector, that it made sense for the Government to fund improvements to these properties directly, and we recommended that Government set aside £3.8 billion to do that, which we were really pleased to see was picked up in the Conservative manifesto at the last election.

For the private-rented sector, we said that regulation was the best approach and that regulations should become tighter over time. Again, we welcomed the recent Government consultation that sets out an approach consistent with our recommendations. The key challenge here, however, has to be enforcement, given that standards in the private-rented sector have not been particularly well enforced to date.

The biggest part of this challenge has to be the owner-occupied segment of properties. Our work looked more at how much energy efficiency we should be aiming for rather than doing detailed policy design for implementation but we did take a look at what other countries have done in this segment and did not identify any obvious or easy solutions. There are a lot of energy efficiency improvements that make sense for bill payers now and could be saving people money, but people are not going out there and installing them. Therefore, what we recommended was that Government need to be trialling a wide range of different initiatives and fully evaluating them rather than putting all their eggs in one basket and that leading to a loss of momentum if a particular policy does not work.

I am afraid we did not go into how to address the big challenge that is owner-occupied housing, but we wanted to put it fairly on the Government's agenda as something that needs consistent focus and effort in order to drive up the rate of installation across this part of the building stock.

Q4 **Chair:** You have been talking about different types of tenure. What about different types of property? There are some that are easier than others in which to bring about energy efficiency, aren't there? Have you looked at



that at all?

**Katie Black:** We did not look at that in detail, to be honest. Our work focused more at a higher level on the total number of installations that you would need across the housing stock in the UK. But what you say is obviously true.

Q5 **Chair:** It is true that the more modern the dwellings are, the easier they should be to deal with because they have cavity walls and so on. Looking at the bigger picture, which is where you said you were approaching it, could you set the scene for the extent to which energy efficiency contributes to the net zero target or the 80% that you did your work on?

**Katie Black:** As part of the National Infrastructure Assessment, we looked at the most cost effective way to decarbonise our infrastructure, including the energy system. Within that, we did a piece of work to cost out different routes to decarbonise heat. I echo what Jenny said: energy efficiency is a no-regrets approach when you look at decarbonising heat.

We do not have all the answers on heat decarbonisation yet, but we found from our analysis that under every scenario, under every pathway you may take, a large amount of investment in energy efficiency was going to be cost effective. It makes sense in every single world. Our recommendation to Government was that the first thing to do was to ramp up progress, then review the overall amount of energy efficiency in heating that they are aiming for when they take a decision on heat decarbonisation, and then align those two programmes of work.

**Jenny Hill:** You asked what properties are harder to insulate; you picked up on that. The ones we see as being more challenging and more expensive to insulate are typically the older properties—those built before 1919, so before the end of World War I. In particular, those dwellings have solid walls as opposed to cavity walls and we estimate that there are currently around 8 million of those properties in the UK. There is also a subset of those properties that will be part of conservation areas and will typically face more onerous planning restrictions and may also require more costly, bespoke approaches to retain their character.

Q6 **Chair:** The 8 million is an interesting figure. Do you agree with me that there are 19 million properties that are not yet at the EPC C rating? Are all 8 million older properties that you are referring to within the 19 million or would some of those have already achieved EPC C rating?

**Jenny Hill:** Eight million is the total number of properties with solid walls. We have seen very low rates of solid-wall insulation to date so you would expect pretty much all of the 8 million to be part of the 19 million that need upgrading.

Q7 **Chair:** Right, so roughly half of what needs to be done will be very difficult to do. Have you done any work on that?

**Jenny Hill:** Yes.



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**Q8 Chair:** Perhaps we will come later to the differential cost between upgrading a modern property and an older one.

Simon, could I ask you to come in, again taking the big picture, if you have looked at this at the NAO? How far along the path to net zero does improving energy efficiency get us, what is achievable and in what timeframe?

**Simon Bittlestone:** I echo Jenny and Katie's comments about the importance of decarbonising buildings as a whole. Buildings are the third highest emitting sector in the economy, hence the approach of marrying up renewables for heating and improving energy efficiency is crucial—replacing fossil fuel heating systems and then showing that houses and other buildings can use less energy at the same time.

Adding to the discussion about different types of buildings, in 2016 we looked at the Green Deal and Energy Company Obligation and the figures for the different types of building, and the figure of 8 million harder-to-treat homes was the same then. As there has not been much energy efficiency installation happening since then, those figures will be about the same.

Comparing installation costs, for the so-called easier-to-treat homes, where you can do things like loft or cavity wall insulation, you are looking at hundreds of pounds, up to about £500, whereas for improving the efficiency of a harder-to-treat, solid-wall home it is several thousands of pounds. Our figures in that report were £8,000 for internal solid-wall insulation and £12,000 for external solid-wall insulation. You can get a sense of the magnitude of the difference in costs and the challenge between the harder-to-treat and the easier-to-treat homes.

One of the things that we noted when we were doing that work was that around 2013, with the launch of the Energy Company Obligation, the Government started to target the harder-to-treat homes because they felt that they were the priority, and that most cavity wall and loft insulation installations, the low-hanging fruits, had already been done. That was the focus of the Energy Company Obligation for the first year or so from 2013, but in 2014 the focus switched back to the easier-to-treat homes because there were concerns about the costs of schemes and the impact on energy bills.

The point we made at the time was that switching between approaches—first going towards harder-to-treat and then back to the easier-to-treat—could potentially be storing up costs in the longer term because we would not be building up the supply chains and getting the various sorts of installers and assessors and the energy suppliers themselves to build up the necessary skills and capability to improve the efficiency of the harder-to-treat homes.

**Q9 Alex Sobel:** My questions follow on nicely from your questions, Chair, and maybe we can pursue them in a bit of depth. First to Jenny Hill, it is



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very heartening to hear that the CCC is developing this pathway around the Sixth Carbon Budget. Could you expand on your work on buildings? How should Government's targets for residential heating efficiency be strengthened to meet net zero? How do we strengthen the current work to ensure we meet the target and what effect would this have on the costs?

**Jenny Hill:** The really key challenge we face now is how to rapidly scale up supply chains in a way that is sustainable from the point of view of the jobs that are created and that deliver quality outcomes. To put a few numbers around that, we are basically talking about going from current insulation rates, where over the past year 50,000 cavities were insulated, and even fewer lofts—under 30,000 lofts—to a point where in a few years' time we have consistently over 200,000 cavities being insulated along with over 200,000 solid walls and much higher rates of loft insulation, so getting loft insulation rates back up to over 500,000 a year.

What we think this means in practice for the immediate term is, first, getting the political commitment to roll forward the Green Homes Grant from March, recognising that getting £2 billion out of the door by March is incredibly challenging. Secondly, we need to be able to give businesses confidence that they can invest and that will not be a funding cliff edge come March 2021. That is first way that we need—

Q10 **Alex Sobel:** Sorry to interrupt, but to clarify that, what you are suggesting is that either the grant rolls over or that the underspend creates a second round, or future rounds, of the grant to ensure that we get all the money out.

**Jenny Hill:** Yes. We want to make sure that that money can go towards insulating homes, that we do not have a cliff edge in March and that there is a range of ways in which that could be achieved.

The other key thing that we need to do to strengthen the current policy approach is to speed up the process of delivering what was set out in the 2017 Clean Growth Strategy. That is specifically the commitment to get all rented buildings up to EPC C this decade by setting a trajectory of minimum standards. We think that we should be doing that in line with the excellent proposals for the private-rented sector that were published about a fortnight ago.

The Government set out a proposal to bring forward the previous date, which was 2030, to 2028, and that would be the date by which all private-rented homes have to meet the EPC C standard. Government also suggested they would do that with an affordability cap set at £10,000, so an uplift from what we previously had for the minimum rungs. We think that proposal is absolutely the right ambition and that it should be replicated for social housing.

Q11 **Alex Sobel:** Great. That leads to my next question. In my constituency, the greatest challenge is in the private-rented sector, particularly the



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Victorian and Edwardian terraces and back-to-backs, which are mainly rented to a quite transitory population so there is not a lot of incentive for the landlords to undertake the work. Do you think a local approach could help where there are those particular sorts of issues and there may be large areas with quite high densities of households that need energy efficiency work to be undertaken?

**Jenny Hill:** I think there is something really interesting here. I was part of the citizens' assembly process earlier this year and I had the pleasure and honour of taking a subsection of the 110 citizens through how we get to net zero for buildings. What was really interesting is that people came out strongly with the view that we needed to be able to tailor to fit local needs. They supported a range of heating technologies—heat pumps, hydrogen district heating—but they emphasised that local areas need to be allowed to pick solutions according to their needs, which I think gets to some of things you were talking about in your constituency.

I guess the broader point here is whether local authorities should be able to go faster, for instance, or set their own approaches. Our committee view on that is that the stated ambition to get to EPC C by 2035 is absolutely an end point, that there is space within it for certain areas to move faster, and that should only make achieving this target easier. There is a huge opportunity to tap into the momentum that has been created by the fact that we have 300 local authorities that have declared emergencies out of a total of just over 400. I believe just under 80% of those 300 have also set a net zero target.

There is obviously a balance to be struck here and what we don't want is a huge proliferation of different standards leading to confusion and pushing up costs of compliance. My committee thinks that there is still scope for areas to set their own agenda more. That is essentially why in our February letter to the Secretary of State for Housing and Local Government, in response to the Future Homes Standard consultation, we clearly stated that local authorities or cities should be allowed to set more stringent or earlier targets if they wished to do so.

Q12 **Alex Sobel:** Katie, do you have any views on a local approach rather than having a single, one-size-fits-all approach?

**Katie Black:** It is not something that we have looked at in detail but the commission would be in agreement with pretty much everything Jenny Hill said.

Q13 **Alex Sobel:** Great. My final question is again for Jenny Hill. I think these questions have all been angled towards the CCC. The CCC's 2020 progress report said that the Government's £9 million pledge over the next 10 years would not be enough to meet our net zero objectives. How much will we need to invest in energy efficiency to meet net zero by 2050, which is obviously the Government's target?

**Jenny Hill:** That is a great opportunity for me to pick up on the previous figures that I was discussing. As I mentioned, we have come up with an



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estimate of around £45 billion for the total programme to 2035 and that is in line with the range from Government of £35 billion to £65 billion. A really important part of that story is how we can unlock the proportion of investment that is private, so I would like to mention very briefly one of things that we think could be really critical there.

We are fully behind the recommendation from the Green Finance Institute to introduce green building passports that improve on the EPCs that we currently have. We think that those could be really transformational because essentially what you are doing there is taking the EPC, which has a number of problems—it is modelled, it is not robust, it is not tailored—and then folding in some of the excellent work that has been done by Government under the PAS 2035 scheme. That is introducing the new home retrofit plan, so a tailored, bespoke approach at household level where you have a conversation between the householder and a fully qualified professional. They can then put in place a staged plan, which takes into account the things that the householder wants, things like aesthetics, and links them up with finance.

The green building passport binds that all together because it wraps in the home retrofit plan but it also makes use of potential smart meter data, so it gives householders and accurate understanding of actual energy consumption. We think that would be robust enough to unlock significant levels of green finance through, for instance, green mortgages. I was very keen to mention that to you.

But if I could just answer your question—I am conscious that I have not quite answered it, and I do want to. At the same time we absolutely recognise, and the Government is right to recognise, that a proportion of the investment needs to be public spending. That has to be in social homes, as Katie rightly identified, the fuel poor and public buildings. In our assessment of whether that is currently sufficient, we think that by and large it is well targeted. We think the National Infrastructure Commission's assessment for the cost for social housing is spot on, and that is an excellent place for us to be.

However, we think there is a remaining gap for fuel-poor, owner-occupied homes. Our quantified investment need to 2030 is £4.5 billion. That is an unpublished figure that will come out in a few months' time. When we compare that to what has been committed currently, we think the committed spend total is around £3.2 billion. That is the £2.5 billion home upgrade grant plus ECO plus a small amount of funding from the devolved Administrations. If you compare the £3.2 billion and the £4.5 billion, you have about a £1.3 billion gap for fuel-poor, owner-occupied homes through to 2030. That is the key gap that we would currently like to emphasise.

Q14 **Alex Sobel:** Just quickly, because I do not think anyone is going to pick this up: are the green building passports intended to be digital passports? How quickly do you think Government will bring in such a scheme?



**Jenny Hill:** Yes, they are digital passports. We see this as a two-phase thing. We think we should get behind the Government in introducing the PAS 2035 standard. The sooner we do that the better, mainstreaming that over the next year or two, first through Government programmes and then more broadly. The question of how you get to the point of having a digital logbook comes down to issues of smart meter data. We think we need to speed up the process of working through some of the logistics to unblock that.

Q15 **Chair:** I am a bit perplexed, Jenny, by your maths here. We are looking at the big picture of trying to get 19 million properties upgraded. You mentioned that you calculated that this will cost £45 billion over the period. Maybe Simon is stronger on maths than the rest of the panellists, but £45 billion divided by 19 million is £2,400 per property, which does not pay for a domestic heating oil boiler. Heat pumps cost a multiple of existing heating systems and that is without spending anything on the insulation. I do not think your sums add up. You are talking about the short term. If you look at the whole thing—

**Jenny Hill:** Thank you so much for giving me the ability to clarify that. The £45 billion is only energy efficiency costs; it does not include the costs of low-carbon heating. The costs for upgrading low-carbon heating are distributed more through the last two decades towards the 2050 target. In trying to reconcile some of these numbers, there is also a significant amount of investment that we think will be generated through the private-rented sector standards. That totals just under £1£4 billion. That leaves the majority of the stock, which are the owner-occupied properties, that are not fuel poor, that Katie was talking about.

That is the substantial policy gap that we have been discussing for the past few years in the wake of the Green Deal policy. That is where we really need Government to come forward with clear views on the role of standards for that segment, plus how they are going to support supply chains in the near term to scale up to a point where we can be renovating those properties at scale in the second half of this decade.

**Chair:** Thank you for that. If you have done a segmented breakdown of the different types of housing and your expectation of what it is going to cost to bring in the energy efficiency measures and then subsequently the decarbonised heating measures, that would help to give us a proper context around this. Thank you.

Q16 **Caroline Lucas:** I have some questions for Katie first of all. You have slightly answered this first one but maybe you could say a little bit more. It is about how you rate the Government's progress on energy efficiency since the NIC recommendations to Government in 2018.

**Katie Black:** We are still awaiting the Government's formal response to the National Infrastructure Assessment, which we are told will be published this autumn. That will be the National Infrastructure Strategy. We have seen some encouraging signs. If we think about the different



types of housing, in social housing the Government have committed to releasing the funding that we recommended, and that is great. In the private-rented sector we are seeing a long-term approach to regulation as well, which is great.

To pick up on what Jenny was saying, the big gap is still in the owner-occupied part of the market. We do not pretend to have all the answers but we would love to see a bit more from Government in coming forward with what they think the right range of different solutions might need to be to drive an increase in the uptake of energy efficiency.

**Q17 Caroline Lucas:** In the National Infrastructure Assessment in 2018, you suggested a target for a rate of installations of energy efficiency measures in the building stock of 21,000 measures a week. What do you have at the moment?

**Katie Black:** It is nowhere near that, to be honest. As a point of comparison, those 21,000 measures relates to England between now and 2035. In England between 2013 and 2017 we saw about 7,000 measures a week installed under Government schemes. Since then the rate has dropped even more. We do not have a way to measure what measures are being installed privately but we think the number is fairly low. We think there is quite a big gap there between where we are currently and where we need to be.

**Q18 Caroline Lucas:** Can you be any more specific than that? I appreciate you are not going to know every single private installation but if you have asked for a target of 21,000 measures a week by 2020, we need to know, maybe with slightly greater clarity, what we are at right now to see what that gap is. Is there a way of finding out?

**Katie Black:** We do not have a way to measure that at the moment. We wanted to set out 21,000 as an idea of the scale of just how much we need to be ramping this up by.

**Q19 Caroline Lucas:** Do you think we are doing half of it?

**Katie Black:** No.

**Q20 Caroline Lucas:** A quarter?

**Katie Black:** Probably not.

**Q21 Caroline Lucas:** Simon, do you have access to any other figures that would give us a better estimate on that?

**Simon Bittlestone:** No, I only have access to the same figures as Katie does. As she said, the monthly installation figures through the Government ECO scheme that is currently running are between 20,000 and 30,000 a month, short of the 21,000 a week that has been referred to.

Being able to see what is going on out there is something we commented on when we looked at the Green Deal and the ECO schemes. Government



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did not have all the monitoring information they needed to be able to track everything that was going on, particularly with trying to move the burden of costs from them being subsidised to being more covered by households themselves. The Department at the time did not have information that would show the amount that private households were putting into the installations themselves so they could not see whether that objective was being achieved.

**Q22** **Caroline Lucas:** There does seem to be a bit of a gap. If we are setting targets but we have no idea whether or not they are being met because we do not have the capacity or the infrastructure to collate it feels like a bit of a problem. Going back to Katie, could you say what else you are hoping to see in the Government's National Infrastructure Strategy?

**Katie Black:** We are hoping to see a comprehensive response to all of the recommendations that we set out in the National Infrastructure Assessment. In particular, our commissioners set out broad tests. The first thing that we are keen to see is a long-term perspective. Our piece of work looked out 30 years ahead and we would like to see a response that considers a similar timeframe, even if the Government obviously cannot make commitments that stretch over that whole period.

Secondly, we want to see clear goals with concrete plans and milestones to achieve them across the range of different infrastructure sectors that we looked at. We are really keen to see clear funding commitments from Government. We have seen them in some areas relating to our recommendations but not all of them.

Lastly, we are looking for a genuine commitment to change. There are some big strategic bits that could yield big returns, alongside proven no-regrets measures. A plan for accelerating deployment of domestic energy efficiency measures is a key thing we are looking for as part of accelerating the progress to net zero, which is one of the real overall key policy goals that we have for the National Infrastructure Strategy.

**Q23** **Caroline Lucas:** How confident are you that there are sufficient numbers of sufficiently trained installers to be able to match the aspirations that you have, and hopefully the Government have as well? We are going to come to some of the shortcomings of the current programme now. We have touched on it already, the idea that it finishes in March and we have already had correspondence from people saying, "There is no point my even trying to train some people up, because by the time they are trained, the thing is over". Looking overall, from what you are planning and the kinds of targets we have been discussing, how big a job is it to get people trained up in sufficient numbers to be able to provide that?

**Katie Black:** That is not something that we specifically look at as part of our remit. We look more at the infrastructure needs we have rather than scale, so I do not know. Another witness might be better placed to answer that question than me.



Q24 **Caroline Lucas:** It is not something that is in the brief. It is just something I was thinking about for the logistics of fulfilling what we are asking for here.

If no one else is jumping in, I will go my next question. Are there risks that energy efficiency policy can fall between Government Departments? If energy efficiency were a national infrastructure priority, when it seems really odd that it would not be, would that be a way of being able to join up Government work across Departments? I do not know who is best placed to answer that.

**Simon Bittlestone:** I will have a go at that one. At least two Departments have a key role in Government responsibilities for buildings. The Department for Business Energy and Industrial Strategy has responsibility for the energy efficiency of the existing housing stock and is administering the Green Homes Grant scheme that has been mentioned this morning. The Ministry of Housing, Communities and Local Government is responsible for the regulations and standards for new buildings. Clearly where new buildings are being built, it is important that they are energy efficient so that they do not need retrofitting later on. It is an area in the net zero big picture where there is more than one Department involved.

Across the whole of net zero it is a hugely cross-government endeavour with lots of things linking together. We are currently doing a piece of work that is due to be published later this year, looking at the co-ordination arrangements that Government are putting in place to ensure that they are joined up on net zero. Potentially we will be able to say more once we have published that.

One thing to add, and something that has already been mentioned, is that there is also clearly a role for local government in this. One of the things we are interested in is how those co-ordination arrangements don't cover just Whitehall Departments but extend beyond to all the other public bodies—local authorities, regulators and others—to make sure that there is clarity of roles and responsibilities and things do not fall through the gaps.

**Jenny Hill:** To build on what Simon is saying—and I agree with everything he has just said—in the past one of the real difficulties has been the division between BEIS and MHCLG, in particular the fact that new build and compliance and enforcement and local authorities have all fallen under MHCLG's remit. We have seen an improvement over the past few years. In particular we, at the committee, are heartened to see the proposals for the future home standard published. There is also a promising sign in the Heat and Building Strategy that is due by the end of this year, where both Departments are working together to look holistically across the building stock to cover energy efficiency and heat.

The National Audit Office has been doing some excellent work in thinking about how joined up Government are in putting together proposals for



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how we can improve on that, and that is also something that our committee has been thinking about a lot this year. Indeed, in the progress report this year we clearly set out all our recommendations by Department. Under the Climate Change Act the response from Government is due today, 15 October, so we are looking forward to seeing what Government Departments come back with against the core recommendations that were set out.

**Q25 Caroline Lucas:** Thank you. Katie, do you want to say anything more about the issue of energy efficiency being a national infrastructure priority?

**Katie Black:** Energy efficiency is one of the priorities that we think should be tackled in the National Infrastructure Strategy, yes, absolutely.

**Q26 Chair:** Am I right that the Heat and Building Strategy sits within the National Infrastructure Strategy?

**Katie Black:** Not as far as I am aware. They are different but hopefully complementary documents.

**Q27 Chair:** Do you have any insight as to when the Heat and Building Strategy is likely to be published?

**Katie Black:** I don't, as far as I am aware. As Jenny said, it is due before the end of the year.

**Q28 Duncan Baker:** Following on from what Caroline has said, and I have said many times through this Select Committee, I do not think we have done anywhere near enough with our built environment or moved anywhere near fast enough to decarbonise. Given what an important area it is, in my view it is still way behind the curve. We know that in 2013 the Green Deal was not a big success, if we are being fairly blunt. By the end of June 2015 we had only about 10,000 households that had installed energy-saving measures using Green Deal finance.

While I recognise, to much fanfare, the Green Homes Grant and I am a great supporter of it, I still have some reservations that we will get to where we need to be. What we should remember is the backdrop has changed substantially in the last five years. People's attention to climate change, decarbonising and improving energy efficiency in their homes has immeasurably changed—and I think we can all say that—but it is still reliant on somebody taking the right steps and moves to want to improve their homes. Simon, what lessons can we learn from the implementation of the Green Deal, with that slightly negative backdrop?

**Simon Bittlestone:** There were 14,000 households that took up the Green Deal scheme compared to some quite ambitious expectations at the time. Ministers were saying it had the potential to transform the entire housing stock, so it clearly fell well short of expectations. We found one of the issues was that there had not been enough testing with people of how the scheme worked.



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There was very little piloting. Some surveys were done but largely this scheme was launched without checking that it was something that consumers would want, despite plenty of people external to Government warning Government at the time that it would be difficult to get people to take up the Green Deal. The engagement that the Department for Energy and Climate Change, as it was at the time, had done showed that people were interested in things like the heat benefits rather than the financial benefits, but the marketing of the scheme focused on the financial benefits. There was a general mismatch between Government expectations of how popular this would be with consumers and what actually happened.

That is something that we have seen in a couple of other places as well as the Green Deal, for example on the Renewable Heat Incentive where take-up has fallen well short of expectations, and also on the smart meters rollout where suppliers are finding it more difficult to persuade consumers to have smart meters installed than was expected. Jenny referred to the work of the Climate Assembly, which should hopefully give some really valuable message to the Government to think about how to engage with consumers and to roll out policies that they will want to take up.

On other lessons, I mentioned earlier the lack of continuity in Government policies that we saw at the time. We looked at the Green Deal alongside the Energy Company Obligation, because these schemes were meant to work together. There was a shift towards the harder-to-treat homes and then back to the easier-to-treat homes. We said at the time there needed to be a bit more of a vision, a strategy around energy efficiency that enabled wider supply chains and energy suppliers to buy into and be able to invest in the training that is needed to get people out to install these measures.

The last area that I will mention is having clear objectives for schemes. On the Green Deal the main target was to improve 1 million homes, alongside ECO, by March 2015. There was a number of other things they wanted to do at the same time. I have mentioned the focus on the harder-to-treat homes. The Government at the time wanted to use it to mitigate fuel poverty and also as a way of transferring the cost of energy efficiency measures from traditionally them being fully subsidised by suppliers and passed on to consumers' bills to instead being something that was paid for by the households that would be benefiting.

We found that there was no clear expectation of where Government wanted to be and by when for those secondary objectives. When things on the Green Deal did not start panning out as was hoped, there was not a clear point at which the Government knew they needed to intervene to get things back on track.

**Q29** **Duncan Baker:** That is very useful. We roll on from learning all about what did not go terribly well. You said there was a clear expectations



shortfall and little piloting. We get to the Green Homes deal now. The Chancellor announced that around July time and we know it will start to kick off very soon but it is for a short period, as Caroline just mentioned. When it first started I had many constituents enquiring how it works. There is not a long lead-in window for people to get accredited into the system. Have we improved? What lessons have we actually learned from what we have pretty much said has not worked terribly well with the previous system? Have we learned from those lessons? Is this new system going to be much better?

**Simon Bittlestone:** We have not looked yet at what the Government are doing around the Green Homes Grant, so I reserve judgment on how well that is being implemented. We certainly recognise that it is being rolled out very quickly, as you say, from being announced in July to launching in September.

What we would hope to see if we look at it in the future is that the Government have drawn on lessons from things like the Green Deal and the Renewable Heat Incentive and built that into their design. Although there is that short window between July and September, you hope they are going back through the archives to look at things that have happened before then to incorporate them into how they are rolling out the Green Homes Grant.

Q30 **Duncan Baker:** How much have the Government learned or how much of it has been that consumers now care? That is an incredibly important message. Jenny or Katie, do you have an opinion on that? I think it has shifted far more to now being incumbent upon the consumer, who now cares far more greatly than they did seven or eight years ago, and they are the ones who will drive the change. Do you have an opinion on that?

**Simon Bittlestone:** Jenny may be able to say more from her work with the Climate Assembly. I know the CCC has cited polling that says there is potentially a difference between the general public support for achieving net zero and the understanding of what that means for individual households and families. Energy efficiency installations, particularly in the harder-to-treat homes, are quite disruptive to people's lives. It is more than just a case of potentially financial incentives that people will be considering. There is the wider disruption to their homes. As I say, Jenny may be able to say more.

**Jenny Hill:** Sure, thank you, Simon. There is a positive story about levels of public support. Simon is absolutely right to distinguish between the level of general support for net zero and the understanding of what that implies, in particular for decarbonising homes and switching away from the natural gas heating.

On the extent to which we have learned lessons from the Green Deal, we are very much in the phase of looking to see how things roll out over the next few months. The key things from the point of view of the householder are to have a really good source of information and to be



confident that they are accessing high-quality installers who have the right skills. For the more complicated retrofit projects, in particular the ones that cover heating alongside efficiency, we think the role of the retrofit co-ordinator is really helpful here. That is a role that has been introduced under the PAS 2035 scheme that I referred to previously. I think some positive elements have been introduced through TrustMark and the PAS schemes. It is really a question of seeing whether we are going to be able to scale those up and get sufficient people signing up and qualified to deliver the level of renovations that are implied by the ambition of the scheme.

**Q31 Duncan Baker:** Moving slightly on, I feel like it is a little bit “suck it and see”. We will see what happens. Of course, it could well be a precursor to a more encompassing scheme that comes later on.

Often we do not talk enough about the secondary part of the scheme. We talk very much about the homeowners and residential area but there is a huge drive to decarbonise public buildings as well. That is an area that has to be pushed on and it may not be covered here. How are we going to monitor and evaluate the success of this scheme? Is it going to be in pure voucher number take-ups? What is your opinion on that, Simon?

**Simon Bittlestone:** I know the Government have stated targets for the number of homes they want to improve of about 600,000 and for jobs created of over 100,000. Those are the headline targets that they will want to measure against. We hope they are looking at other things that translates to CO<sub>2</sub> savings, as we have said quite a lot this morning. There is a big difference between homes and that includes the amount of CO<sub>2</sub> that can be saved by doing different measures.

We hope that doing good evaluation is being considered from the very outset of the Green Homes Grant and being built into the design so that the Government are ensuring that they are collecting evidence along the way, including understanding what the situation is before the Green Homes Grant starts so they can measure the size of the impact.

The key things after the evaluation is conducted are that it is published and made transparent for accountability reasons and that the lessons from it are drawn and used going into whatever comes next. The Green Homes Grant is going to be a precursor to other things, as will presumably be set out in the decarbonising building strategy later this year.

**Q32 Duncan Baker:** What are the key risks in what might be quite a short period of time that this can operate? Are we going to get enough traction on it? If the scheme has been announced and launched in quite a small window, there is obviously concern with consumers understanding it. There will be, as we talked about at the beginning, people getting up to speed with being accredited for it, but are there other more far-reaching, below-the-radar risks with having this scheme rolled out with such speed? Perhaps that is the final area of my concern.



**Simon Bittlestone:** One is the potential for fraud or non-compliance on the scheme. I have mentioned the Renewable Heat Incentive that we looked at a couple of years ago. We found there were issues with the way that BEIS and Ofgem, which administered that scheme, were managing fraud and non-compliance and that they did not have a clear idea of how big the problem was on that scheme or particularly strong ways of bringing the levels down.

There are potentially parallels to a report we brought out last week, which was on the Bounce Back Loan Scheme. This is a completely different bit of Government in business support but is in the same context of Government looking to spend money quite quickly for the recovery from the pandemic. In that report we described that the Government's approach had been about prioritising speed, getting money out the door, and they accepted the risk that some of that money would be lost to businesses that would not be able to pay the money back but also potentially to organised crime.

With the big caveat that we have not looked at the Green Homes Grant—so I am absolutely not implying that we know there are any risks for that scheme in this area—it is something where the Government are spending money quickly, as well as all the issues of consumer take-up, that there is potentially a risk of some of that money not going to its intended purpose.

**Chair:** Thank you very much. The comparison with the Renewable Heat Incentive is relevant, but it is a very different order of magnitude. Under RHI, the sums involved amounted to tens of thousands of pounds and went to tens of thousands of individuals or companies. This scheme is capped in amount at £10,000 and £5,000 for the non-fuel-poverty occupiers but it is going to apply to millions of people, potentially, not in the first six months. I accept the point you are making on fraud, but they are very different kinds of schemes. I think the big challenge is the bureaucracy involved in the GHG. We will come on to talk to the installers about that shortly.

Q33 **Feryal Clark:** We have seen across the UK—and across Europe as well—different Governments using a mixture of incentives and stronger measures in legislation for energy efficiency. Where should the balance lie between the Government setting minimum standards and providing incentives to deliver energy efficiency? For example, how supportive are you of the Scottish Government's proposal to mandate EPC band C at the point of sale or renovation from 2024? That is to Jenny or anyone else on the panel.

**Jenny Hill:** I am very happy to kick us off and then let Katie or Simon come in. We think that there absolutely has to be a combination of standards and targeted incentives. I have talked about the incentives a bit and about targeting incentives towards fuel-poor and social homes and also as part of an economic stimulus to boost the economy over the next few years. The role for standards is really essential. We have the



ability to introduce a clear trajectory of standards that give businesses the ability to invest efficiently ahead of time and have confidence that those investments will then be, in a robust climate, underpinned by the standards. We see those as really essential for energy efficiency and low-carbon heat.

On your question about the owner-occupied approach in Scotland, it is excellent to see the Scottish Government looking at how we can come to terms with this big challenge of owner-occupied homes. That was a gap in the Clean Growth Strategy. As I have said, the majority of homes are owner-occupied so we need to have strong, robust policy there.

There are a couple of ways you could configure standards. You could go down the route that they have suggested—say that you have to have a minimum standard when you are selling a property—or you could look at regulating lenders. The UK Government have been looking at some initial steps in that direction under the Green Finance Strategy, first asking or requiring mortgage lenders to disclose the average efficiency of their property portfolios, which could in theory then allow them to set standards. That could be transformational for the proportion of owner-occupied homes that currently have a mortgage. I am very happy to follow up after this with figures that set out exactly how many owner-occupied homes there are and what proportion of those currently have a mortgage.

Coming back to Scotland, this is absolutely the right kind of approach. There are some really critical implementation questions. In particular there is a concern around enforcement. If you link it to EPCs, we do not think EPCs are currently robust enough to stand up in a court of law because of the huge variation you see in the mystery shopper exercises. You can get several different EPC bands for the same home.

To come back to the proposal that I mentioned for green building passports, not only could they unlock large amounts of finance but they could also provide a robust basis for regulating owner-occupied properties. Our view is that the UK Government should be very much looking at following the Scottish example at some point in the next decade.

Q34 **Feryal Clark:** Does anyone else on the panel want to come in? Okay, I will move on to my next question. We always think Europe does some of these things better than we do. Are there any examples from abroad of incentives for improving energy efficiency that you think we should be looking at?

**Jenny Hill:** I am not sure. I do not know if one of the other panellists would like to come in on this question.

**Katie Black:** I can provide a quick response. When we were putting together the National Infrastructure Assessment, we looked across the board to see what lessons we could take from other countries. First, it is



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difficult for the UK because we have one of the oldest and least efficient housing stocks out there. We have one of the hardest challenges because we start from a lower base.

Unfortunately, we did not really find any examples of anyone cracking this owner-occupied building and market problem. We found that where countries had done it and achieved results that had normally been through subsidy. That led to our recommendation that we need to be trialling and evaluating lots of different policy approaches in this space.

**Q35 Feryal Clark:** Thank you. Finally to Simon, what are the risks around consumer-funded policies such as the ECO for delivering value for money?

**Simon Bittlestone:** The Energy Company Obligation is paid for through all consumers' bills. There is a number of Government policies that have supported decarbonisation of the power sector in particular and some around buildings as well, which are levies on bills. They come with their own issues and risks of things like the transparency of the costs and how much they are impacting on bills.

The Government used to publish a breakdown of how much each of these schemes cost and also how much they save, because when we are talking about energy efficiency schemes they obviously have a benefit as well. They have not produced those breakdowns since 2014, as far as I know, so there is a potential lack of transparency there.

We looked across a few of these schemes, again going back a few years, in 2016. To mention some of the issues we found there, sometimes the governance arrangements and oversight that Government put in place around these schemes are not quite the same and potentially not so strong as when we are talking about things that are funded by the Exchequer and by taxpayers.

We saw, for example, there was a joint board between DECC, as it was then, and the Treasury that had not met. There were issues at the time around the forecast of how much these things were going to cost. Potentially that might have been picked up earlier if those boards had been in place. There are issues of transparency and governance.

**Q36 Chair:** I thank the members of our first panel for your contributions today. Jenny Hill, Katie Black and Simon Bittlestone, thank you very much indeed for joining us. It has been most helpful. Jenny, there were a couple of areas where you said you would come back to us with more particulars.

**Jenny Hill:** I am very happy to.



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Witnesses: Sarah Kostense-Winterton, Michael Lewis, Jenny Holland and Pedro Guertler.

Q37 **Chair:** We now move on to our second panel and I ask each of the panellists to introduce what their roles are within the organisations that they are representing.

**Sarah Kostense-Winterton:** I am Sarah Kostense-Winterton. I chair the Energy Efficiency Infrastructure Group. You will be aware of a report we have recently published. I also have a day job: I work for the non-combustible stone and glass mineral wool industry as executive director. I have two hats on and I will answer questions normally on behalf of EEIG but elsewhere as MIMA.

**Michael Lewis:** Good morning. I am Michael Lewis, Chief Executive of E.ON UK. We are the largest supplier of energy in the UK, the largest supplier of electricity and indeed the largest supplier of renewable electricity.

**Jenny Holland:** Hello, everyone. I am the Public Affairs and Policy Specialist at the UKGBC. I lead on government advocacy work across a wide-ranging policy brief and I have a long-standing background in energy efficiency because I worked for 15 years as Campaigns Director at the Association for the Conservation of Energy.

**Pedro Guertler:** I am Pedro Guertler. I am the Programme Leader for Heat, Cooling and Energy Efficiency at E3G, which is a European independent climate change think-tank headquartered in London.

Q38 **Jerome Mayhew:** I am going to dive straight in to talk about whether EPCs are fit for purpose and are the right measure around which we should be building our measurement of energy efficiency. Pedro, we have seen from our briefing paper and we know that the Government are looking into how they can improve EPCs to see whether they are fit for purpose. We know that they are desktop procedures so there is no actual survey and their *raison d'être* when they were first created was not actually to talk about energy efficiency at all but the cost of running your house and what your bills were going to be like. What are the potential risks and opportunities of bringing forward the Government's energy efficiency targets when built around the EPC?

**Pedro Guertler:** I see the EPC as a placeholder. As was discussed in the first panel, there are many ways in which they can be improved. Currently they are essentially a sometimes inaccurate prediction of energy costs. They need to transition to something that is more of a real-time indicator of energy performance, which can be facilitated by smart meters and digitalisation, and move its wrapper to look more like the buildings renovation passport that sets out a plan for the home at the same time.

Having said that, I think the nub of EPCs is right in that they are well understood. They mirror the energy efficiency ratings that we see on



home appliances and the like and they are very useful to be able to set targets. There are risks inherent, but think of them as something where you can change what is going on under the bonnet while retaining the wrapper as the benchmark for meeting a target consistently.

There are risks, but they can be managed. The Government need to move swiftly to introduce the improvements that we need to see to ensure that they are more reflective of what actual energy costs are and what the energy efficiency of the property is. If that is done, I do not think there is that much of a risk, from an EPC point of view, from bringing the target forwards from 2035, which I can go into more.

**Jenny Holland:** I want to add something on EPCs. Research has shown quite clearly that the building physics model that underpins SAP, which is the methodology for assessing the energy performance of the building, is strong as long as the data that are input are correct. Pedro has somewhat alluded to this.

One of the big problems is with the inputting of poor or incomplete data. Why is that happening? There is real competition out there to produce EPCs at the lowest cost, and the lowest cost often means that a detailed assessment simply is not possible. Also the various accreditation bodies that are accredited energy assessors are all competing for customers, which does not necessarily encourage the greatest rigour in their auditing of the EPCs that are lodged by assessors. As you partly alluded to, Jerome, desk-based audits, which the audits predominantly are, can miss out on picking up things that photographs do not necessarily reveal.

From that point of view it was really good to see that the EPC action plan that BEIS produced last week contained a commitment to tackle poor performance by both assessor schemes and the assessors themselves. I think if we get the data accurate and the assessing and auditing processes properly rigorous, EPCs will be far better equipped to do the job of underpinning Government policy.

I completely agree with Pedro that one of the real key issues is that EPCs rely heavily on generic assumptions about the efficiency of various energy-saving measures. That means there is often a huge difference between the model performance of a home and the actual performance, sometimes two to five times higher the actual performance than the model performance.

Q39 **Jerome Mayhew:** The nub of it is that if you have a green passport it is because someone who has expertise has been to your house, looked around and seen the real-life characteristics of your building. Are we ever going to be able to get to accurate reflection of energy efficiency on a desktop study without having the equivalent of a survey, someone coming around?

**Jenny Holland:** EPC assessors have to go to the home. They do not necessarily spend much time there and that is one of the issues. They



might peer in the loft without actually going up into the loft. It is both a question of the comprehensiveness of the assessment in the home and the auditing process that takes place on a randomised basis by the accreditation bodies.

**Q40 Jerome Mayhew:** Thank you very much for that intervention. Back to you, Pedro. The Government have been consulting and thinking about moving forward the targets to get to band C for private-rented accommodation by 2028. There are obviously opportunities for that but there will be risks as well. Can you talk about what you think the risks and opportunities of bringing forward the Government's energy efficiency targets are?

**Pedro Guertler:** Opportunity and necessity. I will marry them up and focus on that first. As the Intergovernmental Panel on Climate Change says, for a chance of staying within 1.5 degrees of warming, globally we need to cut emissions by 45% between now and 2030. That means the UK probably needs to do more than that. By way of comparison with Scotland, and linking back to the question of targets, Scotland has a 2045 net zero target, so that is five years earlier. This is why in the consultation where they proposed to introduce a mandatory standard for owner-occupied homes of EPC band C, they had initially thought, with their previous decarbonisation target, that 2030 would be the right date by which all homes in the owner-occupied sector would have to be at EPC C, but because of their 2045 higher ambition, they have decided that they should look very seriously at bringing that forward to before 2030. Now we have seen the UK Government, BEIS, propose 2028 as the backstop for the private-rented sector. Therefore, the overall target for 2030 for all homes to reach EPC C is the right one to go for.

There are a few reasons for this, which is why it is right. Net zero is one thing but it also helps to reduce the risk of emissions failure in other sectors. Buildings need to decarbonise more under any scenario than most other sectors do, because it is possible. It widens the pool of homes that are able to take up heat pumps and other low-carbon heat solutions earlier, meaning more decarbonised heating can be deployed sooner, which is also part of the climate imperative here. Taken together, this, for example, can protect the deployment of limited green hydrogen resources for harder-to-abate sectors such as industry and freight. The vagaries of discount rates also mean it increases the net present value of achieving EPC C in homes by about a third.

There is the other thing where you bring everyone to a level pegging, where everyone needs to meet EPC C by 2030, not just fuel-poor households or private landlords, which is now looking at 2028. This fosters a greater sense of inclusivity and also a national mission. For example, especially if it is combined with what the Government are looking at, bringing forward the phase-out date for petrol and diesel sales to 2030, we have the picture that 2030 is a time by which we need to take a lot of action.



Q41 **Jerome Mayhew:** Can you clarify a fact that I am not sure I have right here on the difference in Scotland? What is the current aspiration for the EPC band C date in Scotland? I thought it was 2040 at the moment?

**Pedro Guertler:** I think that is what it had set out in its energy efficiency roadmap a couple of years ago, but it launched this consultation on minimum standards in the owner-occupied sector at the end of last year and it is still reviewing the feedback through the consultation process. It says it needs to revisit the whole roadmap wholesale because it had, in the interim, introduced the net zero target,

**Jerome Mayhew:** It is a work in progress?

**Pedro Guertler:** Yes.

Q42 **Jerome Mayhew:** Thank you very much for that. Sarah, your organisation, the EEIG, has given a quote of how much money is needed to be spent by 2030 for the conversion of our built stock and you have come up with the sum of £73 billion. I am confused by this because in today's session we have had a number of quotes that are widely different, to my reading anyway, and it brings into question the value of these quotes in their entirety. BEIS has a quote window from £35 billion to £65 billion to get up to EPC C, which is a massive variance in its own right. Then we had evidence this morning from the Committee on Climate Change that it is about £45 billion and your organisation has come up with £73 billion. Where do you get that number, how do you get it and how do you reconcile it with the Committee on Climate Change, for example?

**Sarah Kostense-Winterton:** I am going to ask for Pedro's help on this because he is the co-author of the report. It is a mix of both public and private investment getting up to £73 billion. Pedro, would you be able to flesh that out?

**Pedro Guertler:** Sure. As Jenny mentioned earlier, with reference to the £45 billion figure there is another £14 billion of investment coming from private landlords, so that brings that number up to £59 billion. I am not sure if there were other little segments of investment coming from other areas, so it was a particular focus. We are looking at at least £59 billion in that space.

Jenny also referenced the BEIS estimate that had been given in evidence to the BEIS Select Committee of up to £65 billion. Our estimate of £72 billion or £73 billion—I cannot recall—is quite similar. The reason why BEIS has quite a wide range is that it makes different assumptions about how many homes actually get to EPC band C and how many homes exceed a certain cost. They did a sensitivity analysis around different caps and how much is invested per property and how far you can go but you may not get to C. They made different assumptions about how many homes are considered heritage and maybe you would not want to do the work. Our estimate in this report is basically erring towards the maximal kind of approach.



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I can see how the figures look quite different and all over the place, but I am heartened by the fact that they are a lot more similar than you would think when you look at the detail underpinning them.

**Q43 Jerome Mayhew:** Thank you. Sarah, one final quick question. I want to clarify some evidence that your organisation has given, where you have suggested that getting to band C would increase tax revenue by £51.1 billion by 2030 and create demand for an estimated 38,000 FTE jobs in the north. When coming to that assessment, you are taking out of the productive economy arguably £73 billion. When coming to your tax revenue assessment, have you allowed for the loss of tax revenue for all the productive things that that £73 billion might have done elsewhere in the economy, or is this just half the equation?

**Sarah Kostense-Winterton:** This generates tax and all the jobs related to the wider economy. We are looking at it as a jobs generator, the skills and the training, and having more disposable income for consumers to spend within the economy. It does take it into consideration because this is something that obviously takes money but also gives it back.

**Q44 Jerome Mayhew:** There is no political point about this, I just want to understand the figures. Have you allowed for an assessment of the loss of economic growth that the £73 billion might have produced elsewhere in the economy if it had not been taken out?

**Sarah Kostense-Winterton:** No, we have not.

**Q45 Chair:** Following up on that question, we have now had some experience of moving to the minimum threshold of EPC E. In order to get properties that were below E up to that level, there were various limits imposed, like the maximum amount that could be spent. Has anybody done any analysis on what it actually has cost to retrofit properties?

I did a Westminster Hall debate and had a Minister in front of me in February on this subject. The estimates that were then available, when you take it down to what is happening in existing properties, suggested that all these estimates we are talking about of multi-billion pounds are woefully inadequate. It costs tens of thousands of pounds to retrofit insulation of properties that are anything other than the most straightforward. The disruption and the cost to householders, or private landlords if they are in the private-rented sector, is enormous.

It is least disruptive if you can do external cladding, and many housing providers have been able to do that, but if you have to do internal cladding, you have to move out of the house. Pedro is talking about a national effort here. It seems to me that in order to achieve retrofitting 19 million homes by 2030, you would have to relocate two-thirds of the population at some point in the next 10 years. It is cuckoo land, is it not? Pedro, would you like to respond?

**Pedro Guertler:** Sure. There is a fine line between cuckoo land and what we have to do. What is really important here—and I will come back to the issue of building renovation passports—is that we have a plan for every



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property as to how this can be done in a sequenced way. I think we should be doing deep retrofits wherever possible. In many cases this is possible to do but we have to recognise that every household, every home will need a different solution and will have a different ability to implement those solutions over time.

Building renovation passports involves people going into a home and understanding the building. We see these being introduced now in different European countries. They are already being used in Germany. This sequences the improvements that you can make to a home and aligns that with other things that you might want to do, like extending your loft or renovating your kitchen, and adds in what steps you can take to improve the energy performance of the home at the same time. Above all, it does it in a way that means it is compatible with the next things that you might need to do later on.

To give you a concrete example, if you were renovating the roof, a renovation roadmap would, say, given that at some point you will need to externally insulate your outer walls, make sure the roof has sufficient overhang when you do it to accommodate this, or if you want to put a heat pump in later, which may become mandatory in 20-when-ever, make sure that you have the energy efficiency measure put in place first. It is critical that we get the ability to map out what needs to be done to individual properties in a tailored way that works for the building owner and the building occupant.

**Chair:** Thank you. I am not going to dominate the whole session, because I could go on. It is now time for Ian Levy's turn.

Q46 **Ian Levy:** Good morning. I will direct my first question to Michael. Often we can learn a lot of lessons from our friends and neighbours abroad. Can you shed a little bit of light on which green financial mechanisms you think will be the most effective in driving improvements in the owner-occupied sector?

**Michael Lewis:** Yes, absolutely. Obviously, E.ON is a European company, with experience across Europe. Germany is a market where I think we can learn a lot. From my own personal experience, having lived in Germany and having used the facility of the KfW—which is a low interest loan—to upgrade my own home, the mechanism works very simply. I bought a 1950s-vintage house, which had to be renovated and a series of measures were proposed by a certified auditor. The bank, Commerzbank in this case, approved the mortgage with the KfW loan on top, which was 250 basis points lower than a commercial lending rate and which was 10% to 15% of the mortgage value. With that, I was able to put solid-wall insulation in, upgrade the windows to thermally insulated windows, loft insulation and so on, which generated very significant savings in energy consumption.

That model is one we can certainly learn from. If you look at the transition we need to make, I would not say cloud cuckoo land; I would



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say extremely challenging by 2050, there is no question about it. We have to realign a number of policies and bringing in the able-to-pay sector is absolutely critical.

While E.ON fully supports the recent Government initiatives, the Green Home Grants and all the rest of it—it is absolutely critical—we really need to mobilise the able-to-pay sector and that will be unlocked through the mortgage market. If you look at the sheer size of that market—around £275 billion per year into the mortgage market—and can tag on a small proportion of that for energy efficiency measures, you can unlock huge numbers. The trigger point is when a transaction is made.

We know there are 50,000 to 70,000 house transactions per month in England and Wales, so that gives you an indication of the scale of housing we are talking about and the volume of lending that supports it. Yes, it is subsidised, it is a low cost loan, you can do an enormous amount in a relatively short period, but the first thing is to pump prime the system so that we have sufficient skilled people to deliver that work.

**Q47 Ian Levy:** Expanding on that, Michael, are you able to shed some light on where the balance should lie between regulations and financial incentives to improve not just the privately owned homes but the rented homes as well?

**Michael Lewis:** There is no conflict between the two things. I think ratcheting up building standards for both new build and retrofit is absolutely critical. That will drive demand for the energy efficiency measures we need to retrofit, but also the tax system needs to be aligned to incentivise it. That means all elements of the tax system, whether it is carbon tax on gas, moving all of the environmental and ECO costs, for instance, out of the cost of electricity so that it changes the distribution between electricity and gas in the cost, council tax, stamp duty and VAT. They can all be mobilised to support low-carbon investments in existing housing. It requires a complete vision of where we need to get to by 2050, how the building standards need to evolve over that period and how the tax system needs to evolve to deliver this £100 billion investment that we need.

Of course the start of this—and that will need to continue—is the incentives for the non-able-to-pay market, things like ECO Green Home Grants for vulnerable customers, that will pump prime the system, allow us to invest in the supply chain and allow us to train the apprentices, the level 3 engineers we will need to deliver this investment.

**Jenny Holland:** I wanted to say a little bit more about owner-occupiers. Last year the Green Finance Institute set up the Coalition for the Energy Efficiency of Buildings with the express aim of developing financial options to drive the retrofit of existing homes. I was asked to chair the owner-occupier working group, where we looked in some detail at the particular barriers to retrofit investment that that sector faces. Top of those are the long payback periods on investment, coupled, quite



understandably, with a lack of confidence that that investment will reap rewards of a higher property value and, related to that, high up front cost with no guarantee that the energy savings accrued will offset the initial investment cost.

Following on from that, we recommended a number of financing solutions, which I am happy—because time is probably pushing us on here now—to send to the Committee. But very briefly, one of the solutions we opted for is what we call a PACE-style lending product. PACE in the US is a retail lending product that supports 100% of the up front costs with the liability secured against the property and repaid through an additional property tax. I know this sounds very similar to the late Green Deal, but the US has got it right with PACE loan books able to be aggregated and securitised in order to access wholesale, lower cost capital.

We also recommended a couple of what we called help-to-green products, an equity release and an equity loan and also a so-called add-to-my-mortgage digital platform, aimed at streamlining the process for homeowners wanting to access further advances on their existing mortgages.

It is also worth repeating very briefly what Michael said. These financing options will play a key role in driving action in the owner-occupier sector, but on their own they will not drive action at the levels that we need to see. For that, we need to see Government incentives and regulations to drive consumer demand. Michael has alluded to what some of those might look like.

For fuel-poor households, we need the successor of the current ECO to maintain its focus on low-income and vulnerable households. Alongside ECO, we need some Government funding, as we see in Scotland, Wales and Northern Ireland, to support locally-led fuel poverty schemes, topped up with a kind of national grant scheme for households that cannot benefit from the area-based schemes.

It is worth saying that England has the dubious distinction of being the only one of the four UK nations that does not spend a penny of public money on energy efficiency for fuel-poor households, a distinction that I think it needs to lose fairly quickly.

Q48 **Ian Levy:** Does Pedro want to come in?

**Pedro Guertler:** Briefly, just to support what Michael and Jenny have been saying. In addition to the big number around the size of the mortgage market, how much we spend on renovation here is £28 billion. This is well in excess of what we need to invest to improve the energy efficiency of our homes. The big picture is that we need to get into a position where, as Michael said, we ratchet regulation up, we embed structural incentives such as stamp duty, landlord's energy saving allowances and council tax. The subsidy level on offer for able-to-pay



households can taper down over time from the level currently on offer under the Green Homes Grant but obviously should be protected for low-income households.

What is important is that alongside this—Jenny alluded to the work of the Green Finance Institute—space is created for private financial retail products and offers to come into play. A key thing here, thinking about the role of the KfW bank in Germany, is the idea of a national infrastructure bank here in the UK, which Minister Kwarteng has spoken favourably about, and is something that is being looked at in light of the fact that in all likelihood we are leaving the European Investment Bank. We need a piece here that bridges economic recovery with achieving net zero.

A bank with the right remit could play an important part in lowering the costs of capital, absorbing some of the initial risk, aggregating energy efficiency projects to drive the cost of capital down and create the space where retail finance is comfortable to come in with a plethora—and it needs to be a plethora—of offers that work for different households and different circumstances, whether that is mortgage finance or PACE finance, whatever it might be. There are so many things that can be done and I know there are so many things that are being worked on. The Green Finance Institute is working on 20 different initiatives currently. E3G provides the secretariat to its Energy Efficiency Coalition, working with nearly 100 different institutions.

It is important that these things come together and it is very timely right now to be talking about what can be done, given the decisions around the spending review and the National Infrastructure Strategy that can be done here, right now. The Government need to make these decisions to provide the clarity that puts us on a path of the sort that we have all been describing, where we make the necessary possible, we move away from what is very challenging or cloud cuckoo land towards it being possible. We can certainly imagine how that is doable. We are kind of facing the decisions right now, so there is a real sense of urgency here.

**Q49 Ian Levy:** You have all answered my final question; I was going to ask what encouragement we could give. Unless there is anything else anybody wants to add to that, I think that has covered it. I will hand back to the Chair. Thank you very much.

**Chair:** Thank you, Ian. I think Sarah, who you probably cannot see, wanted to respond to that.

**Ian Levy:** Yes, I cannot see on my screen. Sorry, Sarah.

**Sarah Kostense-Winterton:** May I suggest that perhaps the Committee in the interim put some of its thoughts to Treasury? I know it is locked down discussing all the various bids from the Government Departments, including BEIS, but this a crucial time. We are waiting for the smoke to come from the chimney in the next few weeks, but to put its views



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forward, because it is really important. We see that from the support from parliamentarians.

I know that within Treasury they are all fighting for their different pots at the moment and it is vital that we do these things now. We are looking to the Heat and Building Strategy, which we are told will be coming out in December. There will be no funding unless we have something allocated in the spending review, so this is crucial for everything going forward, including seeing the Green Homes Grant perhaps morph into something else or extended in due course.

**Ian Levy:** Lovely. Thank you, Sarah.

**Michael Lewis:** There is another thing we need to remember about all this. We always talk about the cost, which is obviously critically important. We must not forget that as well as the CO<sub>2</sub> reduction benefits, the fundamental point that underlies all of this is that there is a huge economic benefit from energy efficiency in so many different ways, whether it is reduction in energy bills, improvement of air quality, improvement of health outcomes or better quality housing. We must not forget that this is being mobilised to deliver an economic benefit for UK plc. If we get it right, it will be a very big benefit and will have a very big deflationary effect on energy prices.

**Ian Levy:** Yes, I agree with that, Michael. Thank you.

Q50 **Chair:** That is a very helpful contribution, Michael. I think the big challenge for Government and for all the householders is the cost of disruption of getting there. That is where we need to be trying to provide advice, in addition, Sarah, to encouraging the Government to allocate their contribution through the spending review. I am afraid we will not be reporting ahead of December, I suspect, so I do not think we are going to be able to influence that in the event that the spending review does happen this side of the year end. Sarah, do you want to come back on that very quickly before I introduce Barry?

**Sarah Kostense-Winterton:** Very quickly indeed. Basically my members get involved in deep retrofits and we have case studies that show how well it can be done, with minimal disruption, engaging the residents and so on. Could I send those to you under separate cover?

**Chair:** That would be extremely helpful. One of the criticisms that I have had of various people who are trying to provide advice on this is that it is all grounded in a rather theoretical discussion and it needs to be grounded in the actual reality of what it costs to do these different measures. If you look at an EPC recommendation from a surveyor, it will give you lots of points, "If you install a wind turbine next to your property, then—".

That might be feasible in some rural areas, where you can do it without planning, but the cost of installing a wind turbine is way disproportionate to the benefit that you might secure as an individual householder. There



is a lack of reality about the way in which these surveys are undertaken, which undermines confidence in them. Sarah, please, if you can give us some case studies of retrofit costs, that would be helpful.

**Q51 Barry Gardiner:** I want to focus on social housing, but before I do I want to pick up on something that you had said to my colleague Jerome Mayhew. When he asked you about the impact on tax take, you said that there had not been an assessment of that. My understanding was the EEIG said that the economic activity involved in getting to EPC C would increase tax revenue by £51.1 billion by 2030 and create a demand for an estimated 38,000 full-time equivalent jobs just in the north of the country. Is that not correct? What you said did not seem to tally with the information that I had.

**Sarah Kostense-Winterton:** Yes, it does generate tax take, but what we do not obviously take into consideration is the moneys taken out of the economy from elsewhere to pay for that, if you see what I mean. It is how much it generates.

**Q52 Barry Gardiner:** That is just an alternate cost; you can either spend it here or you can spend it there and it depends where the there would be. Yes, indeed. That is fine.

Jenny, can I turn to you? Good to see you again. Could you set out for us what the strengths of addressing social housing are, particularly from a build perspective? What are the advantages of spending money here rather than elsewhere?

**Jenny Holland:** It is not “rather than”; I think it is how you sequence it. Katie from the National Infrastructure Commission talked on the first panel about how it had recommended that the social housing sector lead the way in driving energy efficiency retrofit and that is something I completely agree with. Why? I think the simple answer is that social housing is firmly rooted in local supply chains and the sheer scale of the sector, with its kind of repeating building archetypes and economies of scale, means that it is incredibly well placed to act as a kind of test bed for innovation and then driving down the costs of retrofit across the wider market.

To be fair, the Government have recognised this with their Social Housing Decarbonisation Fund Demonstrator, which is quite a mouthful, the aim of which is to support social landlords to demonstrate innovative approaches to delivering whole house retrofits at scale and at reduced cost.

There has been widespread support for the demonstrator among social housing providers, who hope that it will help them accelerate solutions to the retrofit challenge, but as with the Green Homes Grant—and other people have alluded to this—there are real worries about the incredibly tight timescale. They have been given about a month and a half to submit proposals and because the proposals all have to come from local authorities or local authority consortia, I know of housing associations—



we have some in our membership to whom I have spoken—who are scrabbling around trying to find local authorities to front their bids.

What the sector is crying out for, and where have we heard this before, is clarity from Government, clarity that the rest of the £3.8 billion Social Housing Decarbonisation Fund will be forthcoming over the next 10 years. That was supposed to be announced in the comprehensive spending review. I understand the spending review is not happening, so please announce it in the Budget. They need clarity about the minimum energy efficiency standard for the sector—the Government said 2030 in the Clean Growth Strategy and that has not been enshrined—clarity about when, as they put it, they will be required to switch the gas off and clarity about generally what the roadmap to 2050 looks like. They are very keen to take a leading role, but they need some certainties around funding and Government policies to enable them to do that at the speed and with the vigour that they would like to.

**Q53 Barry Gardiner:** Jenny, thanks. That has been helpful and very comprehensive. I am going to reverse roles here, because normally it is politicians who get their own quotes thrown back at them. You said how welcome the Social Housing Decarbonisation Fund, the £50 million that Government announced at the end of September, had been. But I have a quote from the Green Building Council that says, “this is most disappointing when set against the scale of the decarbonisation challenge”. I presume it was you who wrote that quote, wasn’t it?

**Jenny Holland:** I do not write all the quotes that come out from the UK Green Building Council, just a fair proportion of them. I think the point is at that stage, Barry, we did not know whether that was it, whether it was just going to be £50 million or whether in fact that £50 million was a precursor to the remainder of the funding promised in the Conservative manifesto. At that point £50 million looked like a drop in the ocean.

**Barry Gardiner:** Well, indeed.

**Jenny Holland:** Since then there has been some clarity. There have been documents that have suggested—though, as I say, there has not been a kind of financial statement confirming this—quite clearly, including the guidance around this demonstrator, that the demonstrator is a precursor to the remainder of the fund coming on stream. I am happy to take that one on the chin and—

**Q54 Barry Gardiner:** It would be plus £50 million?

**Jenny Holland:** Yes.

**Q55 Barry Gardiner:** I am glad you stressed the importance of the £3.8 billion coming on. What do you think are the key things that should be established in the demonstrator phase so that Government spends the £3.8 million as wisely as possible when it comes on stream? What are your hopes for the demonstrator?



**Jenny Holland:** The key thing is that the demonstrator needs to be able to show that you can do whole house retrofits at scale and at reduced cost. I would enter a caveat, however, which is that there is a bit of a sense in the sector that by requiring projects to achieve cost reductions of between 5% and 30% in this demonstrator phase, the Government are putting the cart before the horse.

Significant cost reductions are only likely to come over time as more and more of the sector embarks on the retrofit journey and you get the economies of scale, the supply chain ramping up and the cost of products coming down. It would be good if it showed those kinds of things. I think its capacity to do so is somewhat constrained, not least because the timescale is crazily tight.

Q56 **Barry Gardiner:** Thank you. Michael, I will pick up on something that you said about how in Germany there had been a real focus on the skills base to drive the programme forward. Sticking with the demonstrator at the moment, do you expect the demonstrator phase to highlight a problem in any aspect of the skills base and should there be something separate to remedy any shortfall in the skills base?

**Michael Lewis:** I think for sure there is a significant gap between the skills we currently have in the UK and where we need to be in order to deliver zero carbon. That is across the board. In another capacity, I chair the Energy & Utility Skills CEO Council and we are looking at exactly this issue of how we train sufficient numbers of skilled blue collar workers. We will mainly need engineers of level 3 and 4 to deliver this, ramping up our own apprenticeship programmes. I would expect, in direct answer to your question, that there will be particular areas where skills are lacking and we need to train more people.

That is why it is so important that the pump priming that the Government are doing through Green Home Grants and other schemes identifies quickly where those skill gaps are so that companies like ourselves and public sector providers can quickly ramp up the provision of that training. This is a marathon. It is 30 years. We do not have to do it all in two years but we have to get moving in the first two years and we have to identify where the gaps are and quickly train people up to deliver that.

Q57 **Barry Gardiner:** Sure. When we are talking about speed, I think you have precisely four and a half months, because you are a major partner in the Government's local authority programme, to deliver phase 1. How tight is that? How realistic is it? How confident are you that the measures will be installed, the properties will be identified and so on?

**Michael Lewis:** We think we need more time. It is, as you said, a very tight timescale to deliver all that. While we are confident we can mobilise sufficiently trained engineers and technicians to do that over the next nine to 10 months, four and a half months is very short.



We are currently in discussion with Government about how we can modify the schemes to make them more efficient in delivering in the short term but not making it so difficult that we simply run out of time. We need more time in the short term for this initial phase of the work and then we need to learn from that phase about how quickly we can build up the workforce to deliver not just the vulnerable or the social housing sector but also the able-to-pay sector.

**Q58 Barry Gardiner:** If you had the ability simply to dictate, how would you dictate improvements to the local authority delivery scheme?

**Michael Lewis:** The first thing, as you have said, is we need more time. We need probably until the end of next year to deliver these things. That would be a big benefit in being able to mobilise more of the supply chain and more skilled people. I would look at precisely which measures are included.

One of the issues is that in some of the incentive mechanisms at the moment certain things like solar PV, for instance, are included and they are not included in other incentive schemes. We should look to harmonise, based on the ability of each measure to deliver a significant improvement in CO<sub>2</sub> reduction and energy efficiency. I would look to harmonise and extend the timing of the initial phase.

The other thing is that we have an issue around local and national contractors. At the moment, if you put your postcode into the scheme—this is for the voucher scheme—you will be directed to a local contractor. In the case of E.ON, that will be only in the Coventry area, even though we are national, so there are a few teething problems that we need to solve. That is something we are in discussion with the Government on. I think these things will be solved and it is all about learning the lessons from the initial phase before we ramp up.

**Q59 Barry Gardiner:** Post Grenfell, there is a huge amount of construction and remediation work going on in our social housing around the country. We are talking about literally hundreds of thousands of homes that already have contractors on site and in many cases they have scaffolding already up. Wouldn't it make sense for this scheme to in some way be dovetailed with the work that is already going on? Otherwise, you are going to have tenants/residents who have endured one set of building works suddenly having to endure yet another. Wouldn't there be economies of scale if somebody could clash those heads together?

**Michael Lewis:** I think that is absolutely right. Over time it would be ideal that you could harmonise different works going on that are looking at doing similar kinds of things. I think, though, with the urgency of moving forward on energy efficiency—in particular in this Covid environment when we need to create new jobs and stimulate the economy—it is important that we get moving quickly.



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Of course, not all of the work will be on housing that is subject to some other kind of work post Grenfell. I would harmonise it over time, but we should not underestimate the importance of pump priming the market now and moving forward as quickly as possible.

Q60 **Barry Gardiner:** Indeed, but of course the fire safety work is equally important.

**Michael Lewis:** Of course, yes.

**Barry Gardiner:** Thank you for that. As somebody who has been quite critical of E.ON over the years, I have not listened to a CEO from E.ON speak who has given me such pleasure for a very long time. Thank you for what you have said today.

Q61 **Chair:** I am going to ask a few final questions about the existing schemes and the new scheme that we have. I will start with Michael. You have been quite critical about ECO3, the latest phase of the ECO support measures, being unduly complex and now no longer providing value for money because the low-hanging fruit were plucked in the earlier versions. Could you give us your current view about how effective ECO has been and how it can be improved in future?

**Michael Lewis:** It has been effective for particular types of work. It goes back to the answer I gave earlier: we should look to harmonise those works that are available under the different schemes and make sure that there is a menu you can choose from that starts with the highest option in the merit order and works its way down. That is one thing we should be doing.

I think the funding will be increased for the next phase of ECO, which is important. The problem or the challenge we have is finding the households who are eligible. That is always a problem and that is where the complexity and the bureaucracy comes in, but I think fundamentally it is a good scheme to target vulnerable customers for energy efficiency measures. We need to work out how to better target those customers and how we can use data that Government may have to help us target those customers.

The final point, and it goes not just for ECO but for renewable costs generally—whether it is the renewables obligation certificates or feed-in tariffs—is that we should take them out of the electricity bill. It is a highly regressive form of taxation. It should be in general taxation. It will help to make the whole transition to zero carbon much more acceptable to the wider population if we can spread the burden of the initial up front costs much more evenly. Putting it in the electricity bill is the wrong thing to do.

Q62 **Chair:** Do you say that because you get a lot of customer reaction to you, as one of the largest providers of such invoices?



**Michael Lewis:** Of course ultimately we have to pass these costs on to consumers. As I said, a lot of the costs in the bill are generated by Government schemes, which we support. We think it is right to invest in renewable energy, in ECO and energy efficiency, but the problem is that for the lowest income people it is around 1.5% of their household income spent on these schemes. If you move it to general taxation, it moves the burden towards higher income households who are more able to pay.

Q63 **Chair:** Thank you. Jenny, directly following that, irrespective of the point that Michael is making about fairness, do you think that this is an effective measure for raising the money to fund energy efficiency upgrades or do you agree it should move to general taxation?

**Jenny Holland:** I wanted to talk about the particular effect on the fuel poor. I think maybe that was lying behind your question. How effective is it as a scheme for tackling fuel poverty? The answer is not very effective. That is for a number of reasons. Michael has alluded to one of them. ECO is inherently regressive. The lower income households spend a higher proportion of their income on energy bills, meaning that a higher proportion of their income goes to supporting the ECO. It is simple as that.

The Committee on Fuel Poverty, who kind of monitor Government progress against fuel poverty targets, has identified a funding shortfall of £700 million to meet the milestone for all fuel-poor households to be improved to band E by the end of this year, which is two and a half months away. That shortfall is partly down to the fact that ECO funding is a fraction of what it was 10 years ago, but it is also because energy suppliers understandably strive to deliver their obligation at lowest cost, which simply is not compatible on the whole with the delivery of whole house retrofits. It also means that hard-to-treat homes, homes off the gas grid and in rural areas tend to lose out. Indeed, London loses out because parking your van is extremely expensive in London so the suppliers would rather not go there.

Add to that the fact that fuel-poor households are sometimes required to make their own financial contributions and you have a mechanism that is not ideally suited to the job of fuel poverty remediation. To be fair, it was never set up initially to do that. It was a carbon reduction mechanism on to the back of which or on top of which have been dolloped these other kinds of Government policy priorities. That is why, harking back to what I said earlier, ECO will continue and it is right that it should continue.

I think its focus on low-income and vulnerable households should continue, but alongside that we need some Exchequer funding to do the kind of thing that they are doing in Scotland. As I say, ECO has tried to do the best it can, having historically been set up as an entirely different sort of scheme to deal with these other Government priorities that have been landed on top of the original ones, but it is not ideal.

Q64 **Chair:** The Government have a manifesto commitment to invest £2.5



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billion in addressing fuel poverty with the home upgrades grant. We have yet to see how that is going to work. Do you have some advice for the Government about how that should be deployed and how it should interact with ECO or should we scrap ECO and put the whole thing into the same pot?

**Jenny Holland:** No, no, no. I think they should work alongside one another, but I am concerned because the Conservative election manifesto said that these grants—they were called home upgrade grants at that point—would be entirely for fuel-poor households, but now everyone can get a slice of the cake under the Green Homes Grants. That almost certainly means that the majority of grants will go not to the households who need them most but to the ones who are most savvy and on the ball.

All the people in my office are talking about getting Green Homes Grants, but you can bet your bottom dollar that the people who need them the most probably do not even know that they exist. I am worried about that. It is true that 200 million home upgrade grants—

Q65 **Chair:** Sorry, can I stop you there? The manifesto commitment was for over £9 billion to go into energy efficiency measures in homes. None of that was meant to go to owner-occupiers; I think there was £50 million out of over £9 billion. It was going to social housing, some to public buildings, but it is my impression that this £2 billion for the Green Homes Grant, which is directed primarily at owner-occupiers, was a Covid recovery measure and was not part of the £9 billion for the manifesto. Do I have that wrong?

**Jenny Holland:** I hope you have not, Philip, but my understanding is that this £2 billion is the four-fifths of the promised £2.5 billion. If that is the case, the move away from the focus on fuel-poor households, low-income and vulnerable households, is a worry to me. But I do not know, Michael, you are involved in the everyday nitty-gritty of this. Maybe there is yet another £2.5 billion that is going to magic itself into being. I have to say, I was not aware of that.

Q66 **Chair:** Can we ask Pedro, before Michael responds to that? Pedro put his hand up.

**Pedro Guertler:** My reading of this is that the Green Homes Grant encompasses three basic offers. There is the £10,000 offer for low-income households, there is a £5,000 offer for all other households and there is this local authority delivery scheme. I think what constitutes the delivery of the Conservative manifesto commitment at most is the components that are the £10,000 to low-income households and the local authority delivery scheme. However much ends up being committed to the £5,000 offer, I think in the eyes of everyone involved, does not constitute a delivery of the Conservative manifesto commitments, as that is entirely new.



We don't know firmly what the proportion is, how it is split up. We know how much is going to the local authority delivery scheme, how much is being earmarked for that, and that perhaps the remainder is half and half. But the Green Homes Grant offer for able-to-pay households is definitively new, above and beyond the Conservative manifesto commitments. That is what I wanted to add.

Q67 **Chair:** Thank you. Michael, did you want to come in?

**Michael Lewis:** Yes. That was our understanding as well, exactly as Pedro spelled it out, but I think there are a couple of important points to make. We absolutely support the continuation of ECO, by the way, for the avoidance of doubt. I think it has done a lot of good things. Is it perfect? No. Has it enabled us to do a huge amount of energy efficiency work? Yes. Has it enabled us to mobilise a supply chain and train up people to do the necessary work? Yes. We think it has been successful and it can continue to be successful with more funding and, as I said, taking the cost out of the electricity bill.

As far as payments to owner-occupiers and able-to-pay, we should remember that not everybody who is an owner-occupier is in the very high earner category: there are a lot of people who cannot afford to do this work who are none the less owner-occupiers. It is important that we bring those people with us. I go back to the point about mobilising scale. If we are to deliver this zero carbon by 2050, we need to get everybody on board, we need to get everybody understanding the importance of energy efficiency as a foundation tool of delivering zero carbon. That means it really helps if we bring owner-occupiers with us.

It should morph over time into a more standard space and a commercial lending market—albeit maybe some kind of Government-owned investment bank that provides subsidised loans—but in the initial phase we need to invest this money quickly and efficiently and ramp up the supply chain. Bringing in owner-occupiers is really important to that.

Q68 **Chair:** That is very helpful. Of course the preponderance of owner-occupiers are also elderly or at the older age range of the country's demographic. Many of those may not want the disruption or be in a position, as you rightly said, to be able to fund some significant retrofitting to their properties. There is both a financial and a social dimension to this too.

Finally, on the current scheme, the latest scheme, the Green Homes Grant scheme, we have touched on whether or not this was delivering the manifesto or whether it was an additional Covid point. I will not labour that point again, but I would like some views, perhaps from Jenny to start with. How should it be improved, assuming there will be another iteration? What are the current problems that you are seeing with it through your members?

**Jenny Holland:** It has barely got off the ground, so it is a bit too soon to say. I think the overarching point is one that has been made before,



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which is that this cannot just be a one-off. The industry has been bedevilled in the past by stop/start funding schemes and stop/start policies and, therefore, is extremely reluctant to invest in taking on installers, training them up, lest March 2021 sees that cliff edge that the other Jenny was talking about. Clarity that this scheme will morph into a wider and longer lasting energy efficiency programme is absolutely vital.

I do not know how little or big this beef is, but I have a problem that there is no requirement under the current scheme for householders to have their homes properly assessed or to show, if they have been to the Simple Energy Advice website, that they have followed those recommendations. That makes me worry that we might, all over again—as with ECO largely—end up with just single measures going in or, worse still, inappropriate or inappropriately sequenced measures, going back to that building passport formula that we were talking about. As it currently stands, you can put in a heat pump before you put draught-proofing in, which just does not make any sense.

Q69 **Chair:** I am not sure that is right. I think a heat pump is a secondary measure and you cannot do that without investing in primary measures under the scheme.

**Jenny Holland:** A heat pump is a primary measure and insulation is a primary measure, which is good. It has said that you cannot put a heat pump in unless you have insulation already or are installing insulation at the same time as the heat pump. But there are things like draught—

Q70 **Chair:** That covers it, doesn't it, if you cannot do it without insulation?

**Jenny Holland:** Draught-proofing, heating controls are all secondary measures. That is a little bit crazy to do after or not at all, if you put in a heat pump. I think some of the stuff about sequencing needs to be ironed out. I am concerned that there is not a requirement to either get a qualified assessor in or, if you have had a qualified assessor in, follow the recommendations that he or she has made. I would like to see those things being ironed out as we go forward.

Q71 **Chair:** MPs are getting quite a lot of correspondence about this from constituents. The expectation has been set, because of the timeframe, that this is going to be available for only a short amount of time. The requirement to have three quotes from trusted installers in rural areas like mine—and I expect the same would be the case for Cherilyn, who has just joined the Committee from Cornwall, and it is very good to have her with us today for our first meeting—is almost impossible.

To find three installers who are willing to come and quote in remote parts of the country in the timeframe is almost impossible, mostly because they are telling us they already have the business that they can cope with right through to February or March and so they cannot do any more work and hope to get it done.

You say your members are concerned about taking on people. There is an



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enormous volume of work to be done. I accept the Government should send a signal to ensure that there will be continued support of some kind, but surely your members should start to recognise that there is a big volume of work coming down the track, it is already there and it will continue if we are going to try to meet this target. Shouldn't they be hiring and training now?

**Jenny Holland:** There is not a guarantee that it is going to last beyond this six-month period, which is why—Sarah can speak for herself—the EEIG is strongly recommending that the timescale for delivery be extended. That is right, isn't it, Sarah?

**Sarah Kostense-Winterton:** Yes.

**Jenny Holland:** I think that is why we need to see in the Budget, if we do not have a spending review, a commitment to some kind of continuation of this work. The industry has been bruised in the past by stop/start schemes where they have hired and then those people have had to be let go.

Q72 **Chair:** Is the industry sceptical that there is a Government commitment to require energy efficiency of 19 million properties in this country over the next 15 years? Everything we have been talking about today is saying there is going to be a massive pressure on getting this work done. Why isn't industry stepping up and trying to help do it? Sarah, perhaps you would like to come in. I do not want to pick on Jenny particularly.

**Sarah Kostense-Winterton:** I think I have fallen into that well and truly. There is a commitment from industry, but obviously businesses need that certainty. They need to know what they are looking at longer term. With the Green Homes Grant, we have what appears to be a six-month programme but it looks more like a five-month programme because I have heard that the vouchers will not be available until November. It is a very short window in which to try to scale up, move investments and train people within businesses for something that has nothing beyond 31 March. However many positive messages come out, there is a reluctance until they see exactly what is going to happen. They want to do it, they are able to do it, they are able to deliver, but it is until we see that longevity.

For instance, the Green Homes Grant, because of how short it is, stops a lot of measures being done. When there are area-based measures, a lot of solid external wall insulation, which is a very difficult thing to do, it is weather dependent, it requires consultation with residents, and this cannot be done by 31 March. That is why we are asking for an extension. These properties can be done and we want to do it well and we want to do it to the top quality. We do not want to have issues down the line.

Also it is looking at verification methods. We talk about EPCs, but does it do what it says on the tin? We need to be doing that ongoing. I am



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moving back slightly to another subject, but we need to have performance verification as the norm as part of these building passports.

**Q73 Chair:** Thank you, Sarah. Michael wants to come in on this, but would you also kindly address what you think the Government should be doing in looking at the longer term, beyond the GHG, in order to achieve the kind of energy efficiency ambitions that they have?

**Michael Lewis:** I will not repeat what Jenny and Sarah have said. I fully agree: we need a long-term perspective. It is no good, even if you believe the Government are committed to zero carbon, which I do, and are committed to doing all of this work, if we have 1,000 people trained six months too early, it does not help. It still creates a big problem for us commercially, so we have to harmonise this.

Our view is longer term there should be some kind of scheme that follows the GHG and the Government should signal it now. There should be a national co-ordinator with responsibility for delivering contractually agreed outputs with Government and it should work with installers, local authorities and customers to ensure that, first, the right measures are included and, secondly—this is critically important—that it is friendly for customers.

We have done, for instance, a project with Newcastle City Council, looking to install heat pumps as part of a pilot programme. We had around 185 enquiries for a 250 heat pump installation programme initially. Many of them dropped out because the remedial work is not funded by the grant, so even though we are giving them a heat pump, the retrospective work to make good is not funded so people are not interested.

We need to make sure that these things are attractive to customers. That is the role of the national co-ordinator, to bring all this together and apply what works. That is how we see it, but we fully support the GHG and we fully support its evolution into a more long-term scheme, nationally co-ordinated.

**Q74 Chair:** Michael, on the particular example you have just given, would you be able to write to us to indicate a little bit of background behind that, including what were the actual costs of this with respect to retrofitting work and the actual cost of the heat pumps?

Bringing some reality into the discussion is critically important. It is something that I want this inquiry to get to the bottom of, because I think we are all talking in generalities. Until you talk about what it means to a householder and what it is going to cost them or cost the Government to support them taking up this thing, we are never going to get the take-up that is going to be required.

**Michael Lewis:** Indeed. It is simple practical things like, “You are going to rip up my carpet and my floorboards. Who is going to replace my carpet?”



Q75 **Chair:** Indeed, and if you are internally insulating the walls, all of the electrical fittings, all of the windows need work to extend the windowsills and extend the electrical points. This is not a cost-free exercise and that probably means you have to redecorate the whole house. These things are not in the numbers and that is what I want us to get to. Pedro, you had your hand up.

**Pedro Guertler:** I would bring it back to that the Government were moved to bring the Green Homes Grant into play at the time they did because of the economic crisis. It was focused on jobs initially, it recognises the links to net zero and we are poised to enter a deeper worsening of the crisis that we are currently facing. It may not go that way, but we are poised that way right now and we are all worried about it.

If jobs have been the motivator at this moment, the only way that that is secured through the Green Homes Grant is by setting out that clarity right now. A key message from all of us to those looking at the spending review, the Budget, the design of BEIS policies has to be that this is absolutely critical. There is no investment like energy efficiency that is as good at generating jobs. It is unique.

I will be sending you some information on the topic that we discussed earlier about the tax take and whether it is net jobs. It is unique in saving people's energy costs; it transforms what they spend. They tend to spend it locally. Those energy cost savings persist, so if we got to EPC C by 2030, the result is a permanent net increase of 100,000 jobs in local retail and services primarily net. There are very minor losses in energy supply, as you might expect, but that is the end result and a better fiscal position, because GDP is permanently increased as a result.

The only way we get to that and secure what the Green Homes Grant has the potential to do is by saying that we will continue, not at the current level, to support this with regulation, continued investment, tapering, private finance coming in to drive—and this is the key—the largest possible energy cost saving as far and wide across the economy as possible to get those jobs everywhere. This stays in place even if you stop all retrofitting. After you have done a lot of work, a lot of additional jobs remain because of that additional spending and the tax take.

Q76 **Chair:** Pedro, that is really helpful and you have neatly summarised the objective of this inquiry. The other thing that it does, as you say, right across the economy, is jobs everywhere, levelling up jobs into even the most remote parts of the UK, all of whom need to adopt these similar measures. Sarah, a final comment from you and then I am going to wrap it.

**Sarah Kostense-Winterton:** The most important thing is sustainable jobs, but there is also another section that has been hit hard by the pandemic, which is the 16 to 24-year-olds. This is an area that retrains



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them, upskills them and puts them into jobs. That is obviously very relevant for now.

**Chair:** Excellent. That is where we want to see the employer organisations that many of you represent coming to the fore with some schemes so that you can encourage Government to support those schemes, but also encourage youngsters that this is a long-lasting career option for them. Thank you all very much indeed, Sarah Kostense-Winterton, Michael Lewis, Jenny Holland and Pedro Guertler.