

Environmental Audit Committee

Oral evidence: Net Zero Government, HC 2156

Wednesday 4 September 2019

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Members present: Mary Creagh (Chair); Mr Philip Dunne; Ruth Jones; Caroline Lucas; Kerry McCarthy; Alex Sobel.

Questions 1 - 99

Witnesses

I: Carl von Reibnitz, Sustainability Director, Ministry of Justice, Clive Beard, Programmes Director, Prisons Estate Maintenance and Improvement, Ministry of Justice and Dr Rossa Donovan, Head of Environment and Sustainable Development, Network Rail.

II: Professor Jim Watson, Professor of Energy Policy, UCL Institute for Sustainable Resources and Director, UK Energy Research Centre, Julie Hirigoyen, Chief Executive, UK Green Building Council, Dr Rebecca Willis, Research Fellow, University of Exeter and Dr Joanne Wade OBE, Deputy Director, Association for Decentralised Energy.

Written evidence from witnesses:

– [Association for Decentralised Energy - written evidence](#) | [PDF version](#) ( 84 KB) 



Examination of Witnesses

Carl von Reibnitz, Clive Beard and Dr Rossa Donovan.

Q1 Chair: Welcome to our guests. I apologise for our late start. There is nothing else going on in the Commons today or last night! You can imagine the constraints that MP colleagues are under. My apologies to our guests. We are going to have a slightly shorter session and we aim to finish at around 11.30. We are going to have two very quick panels, but we are grateful to all of you for coming today and it is nice to welcome back some familiar faces from the MoJ session. We are very keen and interested to hear how you have been getting on. For the microphones and to test the levels, can you introduce yourself, starting from my right with Carl?

Carl von Reibnitz: I am Carl von Reibnitz, Ministry of Justice.

Clive Beard: Clive Beard from the HMP Prisons and Probation Service.

Dr Donovan: Dr Rossa Donovan, Head of Environment and Sustainability at Network Rail.

Q2 Chair: Thank you very much for attending. I will start with the MoJ and a couple of follow-up questions from our report on the sustainability readiness around your estate and some of the recommendations that we made. Can you tell us what you will have to do or have you done any work to assess what the Ministry will have to do to achieve net zero by 2015?

Carl von Reibnitz: We have a number of activities under way currently to reduce our carbon emissions and improve our energy efficiency. Activities already delivered have achieved a 40% reduction in our carbon emissions, which gives us a great springboard for moving forward to net zero.

Q3 Chair: Is that the Greening Government target to reduce emissions by 38%?

Carl von Reibnitz: That is, exactly.

Q4 Chair: Who sets those targets? One of our criticisms was that it is sort of marking your own homework. You were meeting them early and—

Carl von Reibnitz: We previously had a target of 20% and we forecast what we thought might be achievable yet stretching at 38%. We agreed that we should propose that to BEIS and it agreed that. We have exceeded that, which demonstrates that we will not be restricted by targets in our ambition and we are now very focused on the net zero target and putting ourselves on a pathway to achieving that.

Q5 Chair: Thank you for that. What new, different things do you think net zero means?



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Carl von Reibnitz: At the moment we do not understand the trajectory for reducing so we are awaiting advice from the Committee on Climate Change in, I think, late 2020.

Q6 **Chair:** What do you think the trajectory should be? Surely the earlier you make the emissions reduction savings the greater the cost benefit, because the earlier they are made the longer the amortisation over time.

Carl von Reibnitz: Yes, but at the moment we do not have all the answers. For example, we are reliant on a number of factors such as technological advances, decarbonisation of the grid and potentially some regulatory changes such as building regulations, which we expect to be updated as a matter of course, but we do have a number of plans that we are initiating now to inform our understanding of what is required to meet the net zero.

Q7 **Chair:** When is the CCC going to issue its advice to you on these pathways? You said you are waiting for the CCC.

Carl von Reibnitz: We understand that the CCC is going to issue advice on that in the sixth carbon budget in late 2020 to BEIS. That will inform the Greening Government commitments because no doubt that will be the vehicle that central government will use for taking us towards the net zero target.

Q8 **Chair:** At the moment, less than 1% of your fleet are ultra-low emissions. Has that changed since our report?

Carl von Reibnitz: We have five vehicles that are ultra-low emission. We have another 17 on order and we expect six of them to be delivered by the end of the year. We have a plan for meeting the 2022 target and we are confident that we will meet it.

Q9 **Chair:** What is that 2022 target?

Carl von Reibnitz: That is the 25% reduction and we are confident we will meet that.

Q10 **Chair:** How many of the fleet will be ultra-low emissions?

Carl von Reibnitz: That will be about 153 out of about 1,400.

Q11 **Chair:** It is still 1%.

Carl von Reibnitz: At the moment, yes.

Q12 **Chair:** This is one of our criticisms from the previous report. As I said at the time, we are not asking you to transport hardened criminals to court in a milk float, but we are expecting estates and so on to move rapidly towards electrification. I know you have suffered very significant budget cuts, but the benefits accrue the earlier the money is spent because over time these things are pretty much free to run in terms of petrol costs.

Carl von Reibnitz: Yes, and we have plans to meet the 2022 target.



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Q13 **Chair:** That gets you to 1%.

Carl von Reibnitz: That gets us to 25%.

Q14 **Chair:** A 25% reduction but 1% of your fleet.

Carl von Reibnitz: Of our total fleet.

Q15 **Chair:** Yes, and the CCC says we should be at 9% electric vehicles by 2020, so Government is not meeting the CCC's current target across the country, and then we need to be at 66% by 2030. How are you going to get from 1% in 2022 to 66%?

Carl von Reibnitz: We have vehicles on order and we are working with our suppliers to increase that. We are also looking at different approaches such as leasing ultra-low emission vehicles, so changing our procurement model to enable us to work towards that.

Q16 **Chair:** Do you buy them outright at the moment?

Carl von Reibnitz: Some of them, yes.

Q17 **Chair:** How does that help? How does changing the model achieve the target?

Carl von Reibnitz: It will not require as much up-front capital investment in a year, so it overcomes in-year financial constraints, but our overall carbon emissions from travel are around 7% and our own fleet is a smaller proportion of that. On overall impact, our primary focus is on reducing the carbon emissions from the estate, from our buildings and operations.

Q18 **Chair:** Well, isn't it everything? Don't you have to have a focus across the whole thing? That is the point of every angle.

Carl von Reibnitz: Of course it is, yes.

Q19 **Chair:** Can I take you back to your carbon emissions? One of the things we were concerned about was the number of flights being taken. I seem to remember quite a lot of flights between Southampton and Manchester. What has happened with your flights?

Carl von Reibnitz: We have done a full review of our flights. We have identified the top 20 flying parts of the business and we have engaged with them. We are confident that the vast majority are operationally required, but while we need to do everything within our gift to reduce our carbon emissions, our flights are less than 0.1% of our total emissions. Of course we have resource constraints. I am going to focus on where I think we can have maximum impact on driving down our emissions and I do not intend to be focusing on that 0.1%, recognising there is a Greening Government commitment to deliver a fast target.

Q20 **Chair:** Thank you. In your reply to our report, you said that you projected 18% of the Ministry's fleet being low-emission vehicles—it is obviously a different standard and includes diesel—by March 2019. Has



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that target been met?

Carl von Reibnitz: Currently we have about 122 low-emission vehicles.

Q21 **Chair:** Have you met your 18% target, because 122 out of 1,400 doesn't sound like you have?

Carl von Reibnitz: No.

Q22 **Chair:** Why did you say in your response that you would get to 18%?

Carl von Reibnitz: That was our anticipation.

Q23 **Chair:** What has happened to stop that happening?

Carl von Reibnitz: I do not know.

Q24 **Chair:** We have less than 1% of MoJ's fleet currently and you are hoping to get it to 153 ultra-low-emission vehicles by 2022. The response you gave us in 2018 that you would go to low-emission vehicles by March this year, six months ago, has totally been missed. You are at 1%; is that correct?—122 vehicles out of 1,400 is less than 1%.

Carl von Reibnitz: Yes.

Clive Beard: It is 10%.

Q25 **Chair:** Is it 10%? Okay, but you are still missing it. Sorry, that is my maths. I am not very good after three hours sleep. So, that is 10%. Thank goodness we have somebody numerate on the Committee. We are not at 18% though, so my point stands.

Carl von Reibnitz: No, we are not.

Q26 **Chair:** Can we move on to the estate, please? Talk us through the challenges for the estate because we were concerned that you did not know about BEIS's biomass or any of the Government's low carbon solar panels. It was as if this siloed approach meant that the prisons were locked in the 19th century. Has anything changed?

Clive Beard: It has, and Carl can talk to some of that because a lot of the initiatives have been done centrally that are being embedded in our processes and practices. I would like Carl to talk to it first and maybe I can talk to some of the challenges after that, if that is all right.

Chair: Yes.

Carl von Reibnitz: We are working very closely with BEIS. One of the observations you made last time was that we were not doing much on renewable heat incentives. We have nine renewable heat incentive applications in process or we are developing those, and two CHP quality assurance certifications, which drive the financial incentives.

Q27 **Chair:** Can you send us a list of where they are, please, and let me know if any are in Wakefield?



Carl von Reibnitz: Yes. We are working with BEIS on its Innovate UK transforming construction programme. We are developing a bid, working with our suppliers, for R&D funding to develop what a net zero prison might look like—a new build prison—and how we would achieve that, but we also recognise that a significant proportion of our current estate will still be in operation in 2050, so we are developing a commission to secure some expert advice about how at portfolio level we can achieve net zero.

We are working with BEIS on its Modern Energy Partners innovation programme. That is four pathfinder sites on the public sector estate developing campus-level, integrated low carbon energy solutions, and we have a prison cluster of three prisons where they have developed a high-level proposal for how we could reduce our carbon emissions by about 80% by 2032. Of course that requires significant capital investment and even that would reduce our emissions by only 2%. We know that we need to progress a whole range of programmes to get us to net zero; we are very clear on that.

Clive Beard: The existing estate is quite a challenge, as you can imagine. Much of it was built at a similar sort of time to this building with some of the problems that you have meeting the energy requirements here as well. We have historically not invested as much in maintenance as we needed to across the estate. We are trying to look with Treasury at how we address some of that going forward. As we look at the schemes to develop within the prison estate, we will look to meet our BREEAM. We aim for excellent new builds and we aim for good—

Chair: We are going to come back to that. I am going to ask my colleague to specifically ask about that.

Clive Beard: That is fine. I will not touch on that too much. We have issued some guidance to our governors. We have issued performance measures to our governors and we are working with our facilities management providers to try to ensure that as we go and rejuvenate parts of the estate, as we go and do planned maintenance around the estate, we are addressing small but important things such as replacing with LED light bulbs. In an estate of our size, that is a huge thing, and it has a huge impact, even though it is a small investment. We are working really hard on reducing water leaks. That is partly because we should not have had to if we had historically invested as much as we would like to have done, but we have run two schemes in the last year that have reduced leaks and saved 120,000 cubic metres of water. That is important stuff.

Chair: We are going to move on very quickly, because I am conscious of time.

Q28 **Mr Philip Dunne:** Do you have any prisons still heated by coal?

Clive Beard: I am not aware that we do.

Q29 **Chair:** Or oil?



Carl von Reibnitz: Yes, we have a number heated by oil and I believe one on coal. We have off-grid heating at a number of sites and that is a specific focus for us to look at. We think those are opportunities as they are not connected to the existing gas network but are low carbon heat network opportunities or onsite renewables to address that.

Q30 **Chair:** Which ones are they? Is it Dartmoor or—

Carl von Reibnitz: The coal I believe is Risley and I believe it is about 12 to 14 off-grid heat from oil and they are a specific focus for us.

Chair: That is interesting. Could you write to us with a list? That would be helpful, because we are looking at that on the NHS.

Q31 **Ruth Jones:** I am interested in the 2018 carbon and energy reduction strategy. You have identified that you will have a database for each and every custodial and court site. Have you assessed all of your sites now and, if so, what conclusions have you drawn?

Carl von Reibnitz: In terms of benchmarking?

Ruth Jones: Yes.

Carl von Reibnitz: We have completed benchmarking for prisons.

Q32 **Ruth Jones:** What about the energy strategy and opportunities you have for improving?

Carl von Reibnitz: We have benchmarked the prison estate. That accounts for 75% of our energy-related carbon emissions, and we are using that information to inform our approach. We are identifying which are the good, typical and poor performing, because that enables us to focus in on where we think the greatest opportunities are. We are also providing that information to governors and estates managers within the custodial estate to enable them to work with their facilities managers to address that.

Q33 **Ruth Jones:** Have all sites been assessed?

Carl von Reibnitz: All prison sites. We have a full benchmark.

Q34 **Ruth Jones:** And court sites?

Carl von Reibnitz: No, we have not done it for courts yet.

Q35 **Ruth Jones:** When will the court sites be done?

Carl von Reibnitz: I would need to check that with my court service colleagues to agree a particular deadline. I would be reluctant to say right now, but I would have thought we could—I am contradicting myself—do something by the end of the financial year on that. As I said, I would need to check that with my courts colleagues.

Q36 **Ruth Jones:** This financial year, as in April 2020?

Carl von Reibnitz: Yes.



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Q37 **Ruth Jones:** Thank you. How many photovoltaic systems have been installed so far and how much energy do they generate?

Carl von Reibnitz: I have a list. I know that we have over 40 low-carbon renewable installations. I can get a note in just a moment of exactly how many are solar PV. My estimation would be that our total low-carbon renewable energy generation probably stands at below 5%.

Q38 **Ruth Jones:** Okay, so that is something to be worked on. There is a pretty poor take-up of BREEAM certificates, with 64% that you did not have certificates for. Have you gone back to the missing 126?

Carl von Reibnitz: We undertook to secure as many historic ones as we could. We did that and we reported that in our 2017-18 annual report and accounts, which was one of the commitments we made. We have done quite a lot of work on BREEAM. We have developed a new policy, so not only will we meet the minimum, which is excellent for new build and very good for outstanding, but we are also costing all projects under BREEAM for outstanding for new build and excellent for very good, and we have developed guidance around how we can implement that. We have published our policy, which was another thing. We have published a number of policies that we said we would do and we have provided training to project directors and managers across MoJ and the courts to implement that BREEAM requirement.

Q39 **Ruth Jones:** Is it possible to have a list of the rankings for those missing certificates?

Carl von Reibnitz: For the missing ones that we secured, yes.

Q40 **Chair:** Were all 126 secured? Have they now been secured?

Carl von Reibnitz: No, I don't think so.

Q41 **Chair:** How many have been secured?

Carl von Reibnitz: I do not know off the top of my head, but we will let you know how many we have secured.

Q42 **Chair:** This is a follow-up to our inquiry, the NAO's investigation and your response, so I would expect you to have an idea. There was a thing in the response that said, "It is just a certification". You talk about it at the start of the process and then you do not follow through and it does not get certified and signed off at the end. You cannot talk about a net zero prison if you do not have the sign-off at the end.

Carl von Reibnitz: I don't think we did secure that many, but we have changed our processes and our policy to ensure that moving forward we are getting that certification. We now have a specific BREEAM tracker to monitor if a new project that comes online qualifies for BREEAM. We monitor that certification through the process to ensure that we have those post-construction completion certificates not just a design certificate, which I think is one of the issues that you picked up last time.



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Q43 **Chair:** It was just done at the design stage not at the completion stage?

Carl von Reibnitz: I think that was one of the issues.

Q44 **Chair:** Okay, so there was a kind of understanding. Can you tell the Committee that you have achieved BREEAM certificates on completion for everything that has been built or refurbished since our report was published?

Carl von Reibnitz: Some will not have been completed yet or the certificates will not have been secured yet, but we are in the process of securing those, yes.

Q45 **Chair:** Thank you. That is helpful. A final question on overheating, which we were concerned about. There were 497 complaints in 2016-17. I am not asking you for the numbers now, but I would like you to send them to us.

Carl von Reibnitz: Okay.

Q46 **Chair:** This is a particular issue with order and discipline and particularly after the heatwave. Obviously, you cannot have windows open in prisons for all sorts of reasons, because you never know what is going to fly in through them, but this is a significant issue in all prisons now and is a problem in maintaining order. That is what I am hearing from my own prison officers in Wakefield. Thank you.

Carl von Reibnitz: We have done some specific work on that as well. We are developing an adaptation strategy and we will publish that by the end of the financial year. We have a live model at the moment for different window performance and for our new prisons we have done different climate scenarios. We have modelled different climate scenarios to incorporate them into the design. One of your observations last time was that we were not sitting on all the appropriate cross-Government boards to ensure we get that knowledge share. We now do that; we contribute to that, and that informs our strategy, which we will be publishing.

Q47 **Mr Philip Dunne:** The Government announced 10,000 more prison places and a new build programme. Will those new prisons be built to net zero standards?

Clive Beard: That is the intention, yes. We have not worked the designs through yet. We have only just been told we are going to be building those, but certainly the ones we are building at the moment are working to those design standards.

Chair: We are going to move on to questions for Network Rail.

Q48 **Kerry McCarthy:** This is obviously a question for Dr Donovan. To what extent is your decarbonisation programme aligned with the Government's overarching goal now of net zero by 2050?

Dr Donovan: We are taking net zero very seriously. We have just launched a programme called Project Levertus, which is looking at how



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we improve energy efficiency, where we can generate our own energy, where we can store energy on the side of the track—we have large land holding—and lots of energy management improvements that we can do. We are also looking at the science-based targets to get to net zero by 2050. We have a piece of work going on at the moment that is looking at what is technically feasible over the next 30 years to get to net zero.

Q49 Kerry McCarthy: You are looking to get to net zero as well? It is not just about what contribution you plan towards the Government's strategy but aiming to be net zero by 2050?

Dr Donovan: It is certainly our ambition, yes.

Q50 Kerry McCarthy: Given that the Government now have this more ambitious goal, have you changed your programme to reflect that? How long have you been working towards net zero? Have you taken extra things on board to raise your ambition?

Dr Donovan: During CP5 we reduced our carbon outputs by 11%. For CP6 our targets were 25% from the CP5 baseline and we hope that this work on the science-based targets will inform what we need to do in CP7 and CP8.

Q51 Kerry McCarthy: You do not have details of what you need to do at that stage, but you are doing the preparatory work on that?

Dr Donovan: That is still being done, yes.

Q52 Kerry McCarthy: What are the key challenges that make it difficult?

Dr Donovan: We are finding it increasingly easier. We have buy-in from our CEO and our chief financial officer, so they understand the case and they are supporting investment within that area.

Q53 Alex Sobel: As well as the decarbonisation programme, what are you doing to monitor and address Network Rail's contribution to greenhouse gas emissions that are beyond the scope of the Greening Government commitment?

Dr Donovan: We are not currently in the Greening Government commitments, but we have agreed to be part of them from the next round—2020 to 2025. As far as I know, we are focusing only on carbon at the moment and we are not looking at other greenhouse gases.

Q54 Alex Sobel: For that period 2020 to 2025, what would the challenging Greening Government commitment target look like for Network Rail? What are you aiming for?

Dr Donovan: I think 25% is a good challenging target. To reduce our emissions by 25% is no mean feat, but it is a stretch target as it stands at the moment anyway.

Q55 Chair: That is a 25% reduction from what, from which baseline?



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Dr Donovan: From the exit baseline from CP5, so that would have been last year. About 250,000 kilograms of—

Q56 **Chair:** What is that in megatonnes?

Dr Donovan: Sorry, 250 kilotonnes.

Q57 **Chair:** Okay, so we are not even in megatonnes yet?

Dr Donovan: No.

Q58 **Chair:** That is not very ambitious, is it? Everybody is talking about reductions from a 1990 baseline or a 2000 baseline. You are talking from this year's baseline. That does not strike me as very challenging.

Dr Donovan: No, that is accepted, I think.

Q59 **Chair:** This is a problem with you setting your own targets. It is easy. You set a target of what you can deliver and then you go, "Look, we've exceeded it". Set your own homework, mark it and then A stars all round.

Dr Donovan: I understand that. I think it is that the data was not there and the baseline has not been a very reliable baseline in the past, but in the past five years we have done a lot of work in this area and now we have a much better understanding of what our emissions are.

Q60 **Alex Sobel:** How many megatonnes of carbon does Network Rail emit?

Dr Donovan: It is 250,000 kilotonnes per year.

Q61 **Alex Sobel:** By 2025 you would expect to be at 200,000?

Dr Donovan: Yes.

Alex Sobel: That does not sound like a very big reduction.

Q62 **Mr Philip Dunne:** I have a couple of quick questions on Birmingham New Street, which I think is the largest station rebuild programme where you are trying to introduce sustainability standards. What lessons have you learnt from that—I know it was before your time, but since you have been in post—to inform the next major station upgrade?

Dr Donovan: Obviously, designing a new station and rebuilding it is a very complex process, but we currently have CHP there; we found that to be very useful in reducing our emissions and also sharing our heat with the neighbourhood. There is quite a good CHP district heating system within Birmingham itself. I think it was our first BREEAM development, so there will be lessons learned. I do not know the specifics, but we can write to you on that if necessary.

Q63 **Mr Philip Dunne:** There has been a problem with air quality following the refurbishment. I think you had to spend some more money last year because you were creating unhealthy conditions for passengers waiting on platforms.

Dr Donovan: Yes, that is right.



Q64 **Mr Philip Dunne:** What is the solution to that and how can you design that problem out?

Dr Donovan: The solution to that was we had to upgrade the fans and we had to recalibrate the sensors. Originally the sensors were set to measure CO₂ levels and then the fans would kick in when in fact they needed to measure NO_x levels in order to get the fans to kick in. We are also implementing non-idle policies for diesel trains, so if they are waiting for longer than 15 minutes they must turn their engines off. With some of the older trains that is not possible to do because they have to be started back at the depot. Alternatively, we have the engines parked outside of the covered area venting into the air.

Q65 **Mr Philip Dunne:** Does Network Rail have a role in moving away from diesel engines and into hydrogen fuel cell where electrification is not possible?

Dr Donovan: That responsibility lies with the ROSCOs, the TOCs and the BOCs, and while we can encourage, we have no responsibility in that area.

Q66 **Mr Philip Dunne:** With HS2 and some major railway stations coming, presumably those stations are going to be built to a net zero standard. Are you able to confirm that?

Dr Donovan: I cannot comment on HS2. I do not know what their—

Q67 **Mr Philip Dunne:** It is not part of your responsibility?

Dr Donovan: It is not part of Network Rail.

Q68 **Mr Philip Dunne:** Which is your next major project?

Dr Donovan: We are currently looking at Euston and we are going to use the BREEAM method to improve environmental compliance.

Q69 **Mr Philip Dunne:** That will not be to net zero standard, but it would be the BREEAM standard?

Dr Donovan: I do not know. We can write to you on that if necessary.

Mr Philip Dunne: I think it would be helpful if you could send the Committee a note just setting out what the major projects are and what standards you are trying to achieve. That would be helpful. Thank you.

Q70 **Chair:** I want to follow up on Birmingham but also go back to your earlier statement about your baseline emissions. Surely the Committee on Climate Change, when we did the Climate Change Act, had a baseline set of emissions estimated by the economists for Network Rail and for the rail industry in this country. Is it not possible to work from that 2008 baseline?

Dr Donovan: I am not aware of the detail of that, but we can look at it.

Q71 **Chair:** Could you make contact with the CCC? They have estimates for



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every sector of the economy, and I am sure they have done that work. The reason I say that is paradoxically to be helpful because you might have already achieved quite a large amount of reduction in that time and then you can work out what your rate of progress is and how much you need to increase it. I think it is helpful if you are measuring to know what is achieved and the pace.

The second thing is why 2020 for Greening Government? We suggested to the Treasury two years ago that you should be brought under it. Why has there been the delay?

Dr Donovan: I cannot answer that. It was not my decision.

Q72 **Chair:** I know you have only been in post a year, but that is something that this Committee recommended two years ago.

Finally, is there any scope for reducing idling in other stations? Can this policy be rolled out by you across—obviously not with the Pacers because clearly no one would ever get anywhere up in our area. We know with the electric failure that we had trains stuck in wild and windy places that had to wait for engineers to restart them. That was electric trains, not diesel. With things like the Azuma fleet at King's Cross, there are still heavy diesels coming in and out of there and you can really feel the NOx. What plans do you have to monitor NOx emissions at other large, heavily used stations and to roll out anti-idling across your network of property?

Dr Donovan: I think in all enclosed stations we will learn from Birmingham New Street and we will begin to monitor in those areas. There is already an RSSB research project looking at air quality within various stations.

Q73 **Chair:** When will that research be completed?

Dr Donovan: It is coming to the end now, I think. They were looking at Euston and Edinburgh Waverley as—

Q74 **Chair:** Underground, yes, but why are you waiting for the research. We know that air quality causes 40,000 excess deaths a year. You do not need to be told that it is bad for people's health, it is bad for workers, bad for staff. Why wait? Why not just crack on?

Dr Donovan: I am really happy to crack on. I think it has just been we have had quite a few challenges with the decarbonisation and the Varley review about vegetation. In actually reacting to that, I think it is just resources, basically. It is certainly high on my agenda.

Q75 **Chair:** Excellent. If you can write to us as soon any progress is made on that, that is something that not just this Committee but I am sure the whole House would welcome. Thank you all very much indeed. We are going to move on to panel 2. Thank you, gentlemen.



Examination of Witnesses

Professor Jim Watson, Julie Hirigoyen, Dr Rebecca Willis, and Dr Joanne Wade.

Q76 **Chair:** Would the panel please introduce themselves, starting from my right with Dr Wade?

Dr Wade: I am Joanne Wade, the Deputy Director at the Association for Decentralised Energy.

Dr Willis: Rebecca Willis, Research Fellow at the University of Exeter.

Professor Watson: Jim Watson, Director of the UK Energy Research Centre and Professor of Energy Policy at UCL.

Chair: You are all very welcome. I know we have an empty chair. I am not sure what is happening but I am sure a message will come to me soon. We are going to start, given the time pressures, with a question from Ruth.

Q77 **Ruth Jones:** I am looking to get an oversight of the implications of the net zero emission target for the energy sector. What actions are a priority to decarbonise the UK's energy sector in line with the net zero emissions by 2050?

Dr Wade: I think it is a combination of a move in focus, obviously, away from fossils to low carbon supply but very much away from a heavy focus on the supply of energy to looking at the whole system, including management of demand. I think that is a key priority, to have the whole system in there and a corresponding realignment of the skills we need and the employment we have in the sector to reflect that shift in emphasis.

Dr Willis: I very much agree with Joanne about as much of a focus on demand as supply. To take it up a level, the Climate Change Act is genuinely world leading in setting carbon targets and managing that budgeting process, but there is no clear line of sight between the Climate Change Act and the individual responsibilities of Government Departments or in fact Government agencies or local government. That results in a situation where the Department for Transport, for example—transport is the single biggest sector of emissions—does not make any mention of climate or carbon in its strategic objectives. You have a huge energy user that does not seem to think it is linked to the Climate Change Act. I would say that the thing that really needs addressing is clear targets and clear responsibilities for Government Departments, agencies and local government in strategy, policy and operations.

Q78 **Ruth Jones:** Anyone can set a target, but it is actually bringing people to work on achieving those targets?



Dr Willis: Yes, they do not think it is their responsibility at the moment. They think it is BEIS's job.

Professor Watson: My main point is that net zero is a sea change from the previous target we had, which was 80%. It really means that no sector has a place to hide and pretend that it can reduce its emissions a bit, but all the other sectors will do the work so we will get to the previous 80%. With a net zero world you are not in that paradigm anymore, so for the energy sector just about all surface transport emissions, just about all buildings emissions, all emissions from power stations, most emissions from industry, you will have some residual from aviation, perhaps, according to the Committee on Climate Change, but most of those have to go by 2050. That is a really big change. There are obviously so many priorities. A key point is not waiting until the next decade but starting on Monday morning, continuing the progress we have made on power where we have done well but we need to do more, but kick-starting action on the buildings and the surface transport where we are barely scratching the surface at the moment.

Q79 **Ruth Jones:** Are we looking at how effective working between centralised and decentralised actors in the energy sector can support the transition to this low carbon energy we are so desperately trying to achieve?

Professor Watson: Are you talking about Government actors or just actors in general?

Ruth Jones: All actors really. Everyone needs to play their part, don't they?

Professor Watson: Yes, it very much is. In thinking about the incentives for changing decisions, we are thinking about incentives for individuals, for communities, for local government, for national Government, for large companies and small. In a number of sectors—we did some work on this earlier this year—Government needs to do more to encourage the challengers, the newcomers, the new decentralised actors, you might call them, rather than just expecting the incumbents, the big players, to deliver it all. We found that in the power sector, for example, the big players have probably delivered quite a lot by transforming the way they do things and changing, pretty significantly in some cases; some utilities are unrecognisable compared to what they were 10 years ago.

At the same time, a lot of that has also been delivered by newcomers, new offshore wind companies and in some cases community energy companies. In thinking about the strategy, it is not just a case of getting the big players in the room and thinking about what they need in whatever industry you are thinking about. It is thinking about the sort of incentives that are going to bring in all of the players, and particularly encouraging newcomers. Often you will need them to come in and they will have the ability to act faster and innovate quicker than the



incumbents because they do not have the weight of history and assets and all the other things.

Q80 **Ruth Jones:** Ms Hirigoyen, do you want to add anything to that?

Julie Hirigoyen: Not necessarily. I am very much focused on the built environment bit of it, so the buildings and infrastructure side of things rather than on energy generation.

Q81 **Ruth Jones:** Dr Willis, do you have anything else you want to add?

Dr Willis: I want to echo Jim's point about the need to look beyond the incumbents in both the electricity sector and the energy sector more widely. Our research at Exeter has shown that incumbents have a huge influence on the policymaking process and on Government, and that is to be expected, but it needs an active effort from the Government to counteract that and to look at ways of bringing other actors into the policymaking process as well as into the business environment. One thing that we have called for is something like an energy transformation commission that provides leadership and the kind of co-ordination you need to complement the advice of the Committee on Climate Change to make sure that all actors are working together towards this net zero goal.

Q82 **Ruth Jones:** It is helpful to have specific examples like that. That is really useful. Thank you. Do you want to add anything, Dr Wade?

Dr Wade: I agree with what has already been said. I would add that data is a crucial point for encouraging innovation and at the moment we have a slight tendency to collect it centrally and hang on to it rather than letting energy customers share their energy data with these innovative companies. I think that is really crucial. It is also worth pointing out that if you look internationally there is a tendency for stronger action on an energy transition where cities and localities have more power and more resources. We need to look to those examples and see what we can do.

Q83 **Ruth Jones:** Do you have any recommendations for the UK there?

Dr Wade: I think it is about letting localities take a lead but very much in capacity building at the smaller end. There are lots of people in localities, whether in the public sector or the private sector, who want to drive this transition but do not have access either to the financial resources or in some cases to the skills and capabilities that they need.

Q84 **Chair:** You were all sitting in on our previous session and heard what was said. It is always useful to play the long game and come back to the promises that were made and perhaps not achieved. One of the issues on the government estate in terms of Government use is energy efficiency. What do you think the main opportunities are for the government estate over the next five years? Where are the quick wins that you see, or are there any?

Julie Hirigoyen: In preparation for today I have looked at the state of play in the 2017-18 report, which breaks down the environmental



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performance of the estate against two main metrics—the Greening Government commitment and the energy performance certificates. So the minimum requirements that are currently in legislation, F and G rated buildings, in order to let those out.

Q85 **Chair:** How many of those Fs and Gs are there?

Julie Hirigoyen: There are not many Fs and Gs. You have less than 10% Fs and Gs.

Q86 **Chair:** What is the number of that? Is that 10 or 100?

Julie Hirigoyen: I can tell you. It is in the report. I would precede that by saying that this is not a comprehensive dataset of all the buildings in the central government estate. This is only those for which you require an energy performance certificate and of those I do not think it is even necessarily fully comprehensive. It will probably be a bit less than 50% of the buildings within that estate and of the Fs and Gs you have 33 individual assets.

Q87 **Chair:** What is the trigger for requiring a certificate? Do they need to be a certain size or—

Julie Hirigoyen: Many of the listed buildings in the portfolio will not require an energy performance certificate and the transaction is the trigger. If you have a new lease or a new transaction you will need to produce an energy performance certificate.

Q88 **Chair:** It is a legacy issue. If it is just a building that you have had for years you do not have to have one. There is no actual comprehensive audit?

Julie Hirigoyen: There is no fully comprehensive dataset, but the point that I was making—

Q89 **Chair:** Isn't that a weakness in the Government achieving net zero? Doesn't it need to know what its own baseline is before it can talk about reductions?

Julie Hirigoyen: Correct, it does, but I would also add that these are probably not the right metrics to be basing that assessment on. Energy performance certificates are modelled energy performance of buildings based on not actual, in-use energy data.

Q90 **Chair:** Do you think it is better for Departments to just submit their energy bills and say, "This is how many kilowatt hours we've paid for this year?" Then you know.

Julie Hirigoyen: Yes, you do need to collect the actual kilowatt hours, there are no two ways about it. You do also produce display energy certificates and within the government estate strategy, which is a separate document, there is a commitment to collecting and centralising those. Those would be much more reliable metrics because they are the annual operational energy use and in order to achieve net zero you



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absolutely would need to know the precise energy consumption of those buildings.

Q91 **Chair:** It is only scope 1 emissions though, isn't it? It is the direct stuff from the Departments. It is not all the mobile stuff.

Julie Hirigoyen: Correct.

Q92 **Chair:** Before you go deep in, do we agree that scope 2 should be part of the net zero approach as well? It absolutely has to be, doesn't it—mobile emissions, refrigeration, all of that? Sorry, do continue.

Julie Hirigoyen: The only other point on the energy performance certificates is that there is a consultation happening this summer on tightening the requirements and creating a trajectory so that you are closing in on ratcheting up that F and G requirement gradually as we move towards 2050. That obviously is not going to be good enough so you need to be thinking about that journey, both in legislation for the built environment industry and for yourselves. More telling is looking at the Ds and Cs within the portfolio. If one took a similar trajectory to the clean growth strategy, as many as possible of homes should come up to an EPC rating of C by 2035 and that would require you to look at something like 93% of your portfolio of these ratings within the next 10 to 15 years, which is a very significant exercise.

Q93 **Chair:** But you did criticise those ratings and said they were imperfect and modelled. Do you think the priority is just the absolute energy use; that is quick, that is dirty?

Julie Hirigoyen: It is quite challenging to do because your metering arrangements in many of those buildings will probably not give you very fragmented and useful information. It is definitely worth doing both. If the legislation is still—

Q94 **Chair:** You do not need to read the meters. Don't you just look at the bill and say, "We paid our supplier X thousand pounds", and then reverse engineer it back at whatever it was?

Julie Hirigoyen: You can do that. Doing it that way is obviously quite manual. The most automated way of doing it would be the most efficient but, yes, of course you can manually go back to your bills and so on. Whether you are able to track that—sometimes you will be co-locating with other tenants and so on, so you may not always get a very accurate figure, but I would definitely recommend doing both. If the regulations continue to target energy performance certificates, you will want to be matching up to what the industry is also looking at. If one compares with many large real estate portfolio owners, they will be looking absolutely at both. They will not be able to let their buildings if they are not Ds and Cs in the coming decade, but they will also be looking at absolute emissions and trying to drive those down in the sector.

Q95 **Chair:** Market change is what you are saying?



Julie Hirigoyen: Precisely, and I think trying to take a leadership role to look just at where the regulations are today is not necessarily as progressive as it could be.

Chair: Excellent. That is very helpful.

Q96 **Mr Philip Dunne:** That leads neatly on to looking at what the Government can do in the use of its own buildings to try to provide a leadership role. Can you take us on to that? I do not know whether others want to contribute, but are there some specific—we have transport, buildings, land and water use that I think are the three main areas in relation to energy usage. Finish on buildings. What should the Government be doing to provide leadership? I do not know what proportion of the built estate in this country is owned by Government bodies. Do you have a feel for that?

Julie Hirigoyen: The owned proportion that—

Mr Philip Dunne: Owned or occupied?

Julie Hirigoyen: It represents 42% of the emissions from non-residential buildings, from commercial buildings.

Mr Philip Dunne: Government operations, right.

Julie Hirigoyen: It is a very significant opportunity and absolutely essential for us to achieve that net zero target.

Q97 **Mr Philip Dunne:** Do you have a sense for what proportion of that is at each different energy efficiency rating?

Julie Hirigoyen: That was the point I was just making. Probably only less than half of that is included in this latest state of the estate report.

Q98 **Mr Philip Dunne:** If you an owner-occupier, if it is Government owned, you do not have to fulfil a certificate at the moment?

Julie Hirigoyen: No, not necessarily.

Q99 **Mr Philip Dunne:** Only if you have moved tenure.

Julie Hirigoyen: If you have bought or leased or you had a trigger.

Dr Willis: Looking beyond buildings to emission sources more generally, if you are looking at the Government's own operations I think there are two really important challenges. The first is the one that you identified of leadership, and leadership in a net zero world looks very different from what we are used to. I was really surprised that in the Greening Government commitments report there was a phrase to the effect that Government has avoided being prescriptive about what Government Departments should do. We absolutely need prescription, not of the specific means but absolutely about the ends of zero carbon. I think Government can go beyond that to set an example of what net zero looks like and can set that to the public and to businesses.



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A big reason why we do not achieve carbon targets is a kind of cultural worry that the things we need to do are somehow not appropriate or not feasible. Government can play a huge part in getting beyond that silent denial. Why can't we have a Government who does not allow domestic flights by civil servants, why can't we have no red meat in public sector canteens, and have an honest debate about those things that we need to do to get to net zero?

The second one is on transparency and verification, which came up very strongly in the previous session. There is no independent verification at the moment. I sat on the Sustainable Development Commission that used to do that and we had quite a big team looking at it and now it is just your own heroic efforts.

Mr Philip Dunne: Are there any other countries that—

Chair: Just as a formal note, we are now inquorate so we are now going off the record, but we are going to carry on and just finish off our evidence. We will use the notes that we ourselves make, if that is okay, because people have to run off. I am afraid our visitors need to leave the room. It is now a private session. Sorry about that. Just when we were getting to the good bits.

Sitting continued in private session.