HOUSE OF COMMONS

Public Accounts Committee

Oral evidence: Water supply and demand management, HC 378

Wednesday 22 July 2020

Ordered by the House of Commons to be published on 22 July 2020.

Members present: Meg Hillier (Chair); Sir Geoffrey Clifton-Brown; Sir Bernard Jenkin; Sarah Olney; Nick Smith; James Wild.

Gareth Davies, Comptroller and Auditor General, Adrian Jenner, Director of Parliamentary Relations, and Keith Davis, Director, National Audit Office, were in attendance

Questions 90-177

Witnesses

I: Richard Aylard, Sustainability Director, Thames Water; Richard Emmott, Director of Corporate Affairs, Yorkshire Water; and Colin Skellett, Chief Executive, Wessex Water.

HOUSE OF COMMONS

Report by the Comptroller and Auditor General

Water supply and demand management (HC 107)

Examination of witnesses

Witnesses: Richard Aylard, Richard Emmott and Colin Skellett.

Chair: Welcome to the Public Accounts Committee on Wednesday 22 July 2020. We are here today to talk to water companies. This is off the back of our recent report on the issues around water supply in England and Wales. We are very concerned about the leakage issues and about conservation, and we had a number of other recommendations in our report around water consumption and net zero. We hope to cover some of those issues with the companies, which are here to deliver the infrastructure, serve customers and make sure that they get that balance between price for the consumer and delivering on the infrastructure.

We have a series of questions for you today. This is recorded in *Hansard*, and the transcript will be available publicly in the next couple of days, so this is a formal Committee hearing, even though it is not broadcast. I welcome our witnesses today, and thank you for coming. We have Richard Aylard, who is the sustainability director at Thames Water; Richard Emmott, who is the director of corporate affairs at Yorkshire Water; and Colin Skellett, who is the chief executive of Wessex Water. Members will direct their question to you, as I said in our private moment. I am going to ask Sir Geoffrey Clifton-Brown to kick off.

Q90 **Sir Geoffrey Clifton-Brown:** Good morning to all our witnesses, and welcome to this important session on water. My questions are around sustainability, water supply and the balance between pricing and investment. Richard, we have had cordial and constructive dealings over many years, so perhaps I can start with you, as yours is the biggest of the companies. The headline in our report was that we might run out of water by 2050. You have the biggest consumer base of all the companies. What is your view on that, and what investment are you involved in to try to mitigate that?

Richard Aylard: We certainly will run out if we do not do something, but there is a lot that we are going to do. The challenge, first of all, is that by 2040, we will have an extra 2 million customers, and we will be serving those customers against the background of a changing climate. The starting point is to get demand down further, as far as we can. That will mean fitting many more smart meters, getting leakage down and encouraging the efficient use of water. If we had to look after the same number of customers in the same climate, that is all that we would need to do, but we won't; with the growth that we are expecting, we are going to need new sources of water.

We are working with Ofwat, the Environment Agency and other companies, importantly, to look at the best way of making sure that we can supply the expected demand up to 2050, and indeed beyond. There are a number of big strategic options that are being looked at in detail, and Ofwat has made funding available to make sure that that work can happen. We expect to be able to say more about which are the best options in a little under two years' time, but the main ones that we are looking at are a big new reservoir and, subsequent to that, a transfer to bring water from the wetter west of the country into that reservoir, and then into our system.

Q91 **Sir Geoffrey Clifton-Brown:** Richard, that was a really helpful answer. I will come back to you on some of those issues in a minute, but I first want to ask our two other witnesses the same question. Richard Emmott, is your company planning to ensure that you have a sustainable water supply leading up to 2050, and what are you doing to invest to ensure that?

Richard Emmott: Clearly, the dynamics are similar in the north as they are for the Thames, but the population and resilience positions are slightly different. In Yorkshire, as a result of significant investment in the late 1990s, which has been subsequently increased, we have a grid that supplies water throughout the county, and which basically means that we can move water from east to west. We also have quite a nice blend of water resources in Yorkshire, between reservoirs, river abstraction and groundwater in the east, so we have a lot of flexibility of supply and are one of the most resilient water regions in the country.

We have put in additional investment in the last five years to fill the gaps, if you like, within the grid. There are points in the area where you have single-source supplies, and those are now connected to the grid. That has meant that at times of peak demand in 2018 and earlier this year during covid, we have been able to manage resources very effectively.

None the less, the population of Yorkshire will increase by approximately 1 million people over the period that you mentioned. Our objective, through a number of investments and measures, is basically to try to maintain the level of water that is currently in supply, and to use that to supply an increased population. Leakage reduction is clearly a significant component of that. In our business plan, prior to the final determination, we put in a more aggressive leakage target than what was finally allowed by Ofwat.

Q92 **Sir Geoffrey Clifton-Brown:** Can I just stop you there, Mr Emmott? We are going to deal with leakage later as a whole section. That is a really helpful answer, and I will come back to you in a second. Colin Skellett from Wessex Water, can I ask you the same question?

Colin Skellett: Not only have we had no restrictions on water use for 40 years now, but we actually put the same amount of water into the supply as we did 40 years ago. That is from a combination of dramatically reducing leakage and encouraging more metering. The same amount of rain falls now as has fallen, on average, every year, but rainfall patterns

are significantly different, so we get more intense rainfall and longer dry periods.

That means that we need to do three things. We need to invest, and we have already created a regional grid so that we can move water around our region and can link into Bristol and South West Water and transfer water between us. Like other companies, we are working in combination with our neighbours. We also need to invest in the underground infrastructure, because we are not investing at a rate that will drive down things such as leakage—I am sure that we will talk about the resilience of the infrastructure at some stage. We also, like others, need to get the message home that using water wisely is really important. Per capita consumption has come down, but it is starting to creep up again, and during covid, we saw it increase because people were at home and using water differently.

That is the combination of things that we need to do. We are a low water-stress area, but we still need to take steps to ensure that we can maintain that resilience for the next 30 or 50 years.

Q93 **Sir Geoffrey Clifton-Brown:** I have a series of quite important questions for you all. I will stick with you, Mr Skellett. On the role of Ofwat and the Government, our report was critical of the Government for not providing a sufficient lead on water resilience. Do you have any comments on that?

Colin Skellett: I think there are three things that the Government could do. We look at water resources over a 25-year period, but we should also—with the Government and Ofwat—start looking at water infrastructure over a similar period, because we do not at the moment. If you look at the rate of investment in water mains, it assumes that they last about 170 years, and they do not. We need to invest more and take a long-term view on that investment.

Secondly, the Government could now start to enact controls on new development. We are going to build lots of houses, and we need to build them with water sustainability included. There is no reason why we cannot build new properties with a target of 100 litres[1] per person, rather than the current developments taking place. And we ought to get on with setting some targets for white goods and some labelling for white goods. I was interested, looking back at some of the papers: in 2008 DEFRA said they would study a voluntary scheme and then take a view. There is an opportunity now, with the Environment Bill, to pick up all these things up.

Q94 **Sir Geoffrey Clifton-Brown:** We are going to come on to that. It is a really well made point. Thank you for that. Can I come back to Richard Aylard? I know you have had lots of battles with the regulator—with Ofwat—and I know that you are not appealing against the Competition and Markets Authority's last determination, so can I ask you how constructive or otherwise Ofwat's role is in setting the price over the next

[1] Thames Water would like to clarify that in reference to this sentence they meant 100 litres per day.

period, as opposed to setting the investment? You and all the companies, as I understand it, are required to reduce their price by 12% over the next five years. Is Ofwat's role in producing sustainability of water to 2050 helpful, and if not, could you suggest any modifications to its role that would make it more helpful?

Richard Aylard: I think this has to start from the top. We would like to see a really firm steer from Government, from DEFRA, ahead of each price review round—not just guidance to companies, but clear guidance to the economic regulator, to our stakeholders and to customers as to what is going to be needed, through a strategic policy statement. Then we could all work towards that. There is a strategic policy statement each time. I do not think it has been firm enough, and I am not sure there is ever any auditing of whether it has achieved the results it was intended to achieve.

If I look at this particular price review round, we asked for £11.7 billion of investment in a plan that, because of historically low interest costs, meant we could deliver all that while keeping bills flat in real terms. That had 87% acceptability from our customers, which is a very high figure. Ofwat, as they are perfectly entitled to do, as the independent economic regulator, said no, £10.1 billion is the number. So we are going ahead on the basis of a £10.1 billion plan, but we believe that the extra £1.6 billion was a missed opportunity.

We hear from our customers that they do not want us to store up problems for the future. With that extra money, we could have done much more to look at long-term resilience, to pick up the point that Colin Skellett made about the need to replace water mains. Rather than just patching up mains so that they leak less this year, we could have been replacing them, so that they are still leaking less in 10 and 15 years' time. So there is a missed opportunity there.

Since the price review, I have to say there is very constructive discussion with Ofwat, and there is potentially some more money on a conditional basis available, which is good. We have got to do a lot of thinking, a lot of talking, and a lot of collaboration before the next price review, to make sure that we get the investment we need. Otherwise, we really are storing up problems for the future.

Q95 **Sir Geoffrey Clifton-Brown:** Can you explain the process to the Committee? You wanted to invest £11.7 billion. You were told you had to invest £10.1 billion. What was the basis of Ofwat's thinking, to produce that number? Was there a scientific reason, or was it plucked out of thin air?

Richard Aylard: Ofwat use a series of models to assess what they think a well run water company in a particular area ought to need to spend. They also look at their view of what customers are asking for. Then they look at the efficiencies that a well run company ought to be able to make. Their belief, to which they have a perfect right, was that we could deliver what we needed to deliver for less. They are the independent economic regulator; that is their job. We of course had the option to appeal to the

Competition and Markets Authority if we wanted to. We chose to accept the decision and get on with the job, because it is a very lengthy, disruptive, intensive process, and we thought we should simply get on with doing the job and make the case even more strongly, and with even better evidence, the next time round.

Q96 **Sir Geoffrey Clifton-Brown:** That is very helpful; thank you. Richard Emmott, I realise that this is a sensitive question. You may not wish to answer it. You may wish to write to the Committee. You may wish to be very careful in how you answer the question, because I understand that your company is appealing to the Competition and Markets Authority. Factually, and very briefly, could you tell us what the basis is for that decision, because that is not contentious—why you have decided to do it?

Richard Emmott: No, and our statement of case is a public domain document and is available to the Committee. I can send the executive summary of some of the documents we have submitted to support our case.

In brief, we took a principled decision that the final determination from Ofwat rather decisively got the balance wrong between short-term price cuts and long-term investment. We felt that potentially created an intergenerational unfairness point, whereby essential resilience spend was being kicked down the road to future bill payers in the pursuit of short-term price cuts. That is all a matter of public record, and there are a number of examples that illustrate what that might mean, which I can share with the Committee, if that would be helpful.

That has had consequences for us in Yorkshire, one of which has been a halving of potential spend on flooding and resilience projects in Hull. It has reduced the investment available to increase the capacity of the sewerage network to cope with climate change and increased rainfall, which colleagues will be well aware of; it has prioritised short-term solutions such as jetting; and it has slowed down some of the process of demand management that we would like to do by rolling out a more extensive metering programme. There are some other distortions as well, which I will happily share with the Committee in writing.

Q97 **Sir Geoffrey Clifton-Brown:** That is really helpful. I am going to come back to Colin Skellett in a minute, but given that we have heard from both of you in this hearing that you are dissatisfied with the process of setting, and given that this five-year setting plan is really important, can either of you suggest any alterations to the process that would improve it and achieve the objectives we all want to see: reduction in leakage, sustainability, discharges, investment and so on?

Richard Emmott: One critical factor for us would be getting better alignment between the Environment Agency's aspirations and Ofwat. I will give you two examples to illustrate that. The water industry national environment programme is an investment programme driven by the urban waste water treatment directive. Rather late in the business planning process, we were suddenly presented with the decision that the necessary

investment to remove phosphorous from the waste water treatment supply had to be telescoped down into one five-year period. It was originally to be delivered over three five-year periods—15 years—so suddenly you've got a £600 million price pressure there. That forces you into some perverse solutions.

The other thing it meant was that we could not investigate nature-based solutions, which would have been much more sustainable in the long term. We ended up investing in chemical dosing—the use of ferric sulphate to remove phosphorous—rather than the more sustainable, longer-term solution, which is bio nutrient removal.

Q98 **Sir Geoffrey Clifton-Brown:** Thank you very much. I saw you nodding along with that reply, Mr Skellett. Would you like to comment on the mechanism that Ofwat uses, please?

Colin Skellett: The regulatory system has worked well over many years, but it is probably time to change it. There are two things: the first is that it does not recognise the importance of resilience and climate change. That is what matters to customers; it is what matters to all of us, and we cannot continue to under-invest in infrastructure. One of the things that Ofwat introduced many years ago was serviceability, which means that you do not invest until the pipe keeps bursting. What we should be doing is investing to make sure the pipes do not keep bursting, so we need to invest more. We need to redress that balance, which is why I think you could change this into a longer-term—25-year—infrastructure investment price review, and take it away from this five-year cycle that burns a lot of time and energy and does not achieve a lot.

It has also got incredibly detailed. We have 46 performance commitments, so you are moving from big macro-regulation into micro-regulation, which distorts priorities. I think now is a really good opportunity to ask, "What do we want regulation to deliver?"

To pick up on Richard Emmott's point, there is an inherent tension between quality regulation and price regulation. There always was, and there needs to be a way of bringing them together. If you look back three or four price reviews, there used to be quadripartite meetings, at which the Department held the ring between the parties. Now that doesn't happen, so we need to take a fundamental look and say, "How do we deliver resilience? How do we deal with climate change? And how do we deal with carbon?". We are signing up to carbon neutrality, and carbon neutrality needs to be core to the programme going forward.

I have a final point about what is attractively called WINEP—the water industry national environment programme. We have a site at Wareham, and I have now written to two Secretaries of State saying that we are due to spend about eight and a half million quid to put in a plant that will use a lot of chemicals and energy; we could solve the problem much more easily by managing the catchment. We are going to do that anyway, but we are required to build a plant that nobody will ever use, and that must be madness.

Q99 **Sir Geoffrey Clifton-Brown:** Thank you, Mr Skellett. I am finally coming to you, Mr Aylard, to comment on the process of how the operator sets the five-year plans. Can you suggest any improvements?

Richard Aylard: Richard Emmott and Colin Skellett have covered the main points, but I think that the resilience point is the really important one. At the moment, we are resilient, in terms of supplying our customers without any emergency restrictions to a one-in-100-years drought. That is cutting things much too fine. We need to get to one in 200 and one in 500.

There is now a national framework, which involves regulators and the companies. There is also regional water resource planning. So there are lots of green shoots—encouraging things happening. We need to get that built into the strategic policy statements from DEFRA, so that we all know exactly what we are trying to achieve and by when. Then the industry can come up with what the most efficient ways of getting there are, and it can be challenged on that by Ofwat. But it's the big targets that we need from Government.

Sir Geoffrey Clifton-Brown: I thank all three of you. We have heard lots of fascinating information. I could ask lots more questions, but I'll leave it there, Chair.

Chair: Thank you. We are going to be covering, obviously, some of these issues in more detail. I shall bring in Sir Bernard Jenkin.

Q100 **Sir Bernard Jenkin:** Good morning, gentlemen. You have explained what perverse incentives are created in relation to sustainability, the environment and so on, but can you explain how you actually manage the governance of all the conflicts that you have? For example, do you have a target return on investment? If you are investing in capital expenditure, what is your target rate of return? Anybody?

Colin Skellett: We don't, because the rate of return on investment is set by the regulator. Every five years, the regulator decides what an appropriate return should be on investment as part of the price review. The great missed opportunity of the last price review was that the cost of capital is much lower than it has ever been, and the efficiencies that the industry delivered create real opportunities. The choice was between investing more and reducing bills. We have said publicly that we think it was a missed opportunity to start the increased investment that we are certainly going to need.

The process is very lengthy and complicated. The price review takes over three years to go through. It involves an enormous amount of time and energy. Regulation in total adds about £15 to every customer's bill, so anything we can do to simplify it and make it a more streamlined process that focuses on the really important things, rather than lots of small targets, would be really welcome.

Q101 **Chair:** Mr Skellett, you talk about £15 on each customer's bill. Is that annually?

Colin Skellett: Yes. That is the total cost. If you take the cost of everything we have to do for regulators—the licence fees and everything we have to pay—and our internal costs, it adds about £15 to £16 to customers' bills.

Q102 **Sir Bernard Jenkin:** I should have declared an interest at the start. I am chair of a very little water company that manages a tiny distribution network to a few holiday chalets in Essex. There is no conflict of interest involved and it is not a declarable interest in the register because I do not receive any remuneration. It is like a residents' company, but I am advised that I have to declare that.

Can you just say, in one word: what is the regulator's required rate of return?

Colin Skellett: Let me check and give the precise answer rather than remember what I think is in my mind. I will give it to you in a moment.

Q103 **Sir Bernard Jenkin:** Okay, and what rate of return do your shareholders expect in dividends?

Colin Skellett: If you look at a water company, the base rate of return that comes out in dividends is the rate of return that flows from the cost of capital and the assumptions made by the regulator. To exceed that return to shareholders you have to outperform, and one of the beauties of the incentive-based regulatory system is that companies are incentivised to outperform, because there is a sharing of the benefits of that, which then flows through to customers, because you start from a more efficient base. So the return set by the regulator is the return that then, without any outperformance, flows through to the shareholder.

Q104 **Sir Bernard Jenkin:** Yes, but the objective of Ofwat is to make sure that the customers benefit from the improved performance—not just the shareholders. I imagine that the yield you offer to shareholders is at the more expensive end of the money that you have invested in the business—that the loan capital is now much cheaper than the dividends you pay out on your share capital. Is that correct?

Colin Skellett: You are right. The base return is the regulated return. At the start of privatisation, any outperformance used to flow through to the shareholder. Outperformance is now split between an immediate return to customers and to the shareholder; but then it sets a new efficiency base going forward so, effectively, the customer picks up all the benefit of that, because you are starting from a new, more efficient base.

Q105 **Sir Bernard Jenkin:** The point is, if you have a target rate of return from your asset base, obviously you want to increase your asset base as much as possible, because that increases the size of the business and will increase the dividends you pay to shareholders and, indeed, the bonuses you pay to directors. So we have to have this regulatory system of a sort, don't we?

Colin Skellett: Yes, absolutely. I am not saying we don't need a regulatory system. We do need a regulatory system.

Q106 **Sir Bernard Jenkin:** But how do you manage these conflicts, as a board? Do you just rely on the regulator to set the values of the company, or do your companies have your own internal system of creating some kind of values-based decision making?

Colin Skellett: The way the board operates is that it first of all has to approve the business plan and acceptance of the regulatory deal. From that, if you want to look at dividends, there is a dividend that would flow out of the regulatory deal, because it is part of the assumption that the regulator makes in their modelling. That is the assumed base dividend. We would then have other constraints, like we have to maintain investment-grade credit rating, so there is a limit on gearing, and so on. All those things are factored in, so the only way you can pay out more than the regulated dividend is if you can genuinely outperform by improvements in efficiency, either on capital delivery or operations. That is the way the system works. It has worked really well in driving up efficiency and delivery in the water industry.

Q107 **Sir Bernard Jenkin:** But there are plenty of examples around the world, and, indeed, even in the United Kingdom, where private capital is invested through loans into these companies, rather than share capital, which is more expensive. What is the benefit to the customers of having such a high proportion of equity, which has to pay dividends? And—let's say boo to the goose—some of the salaries and the bonuses of the directors also attract a lot of attention. I am in favour of paying the rate for the job where there is good performance, but these are conflicting incentives.

Colin Skellett: I don't think they are conflicting incentives, because the independent regulator—it is important that we have independent regulation—sets the base return that should be expected and the investment that is required. That's what the regulator's job is. The job of management then is to deliver that and, if possible, to outperform, and that outperformance benefits shareholders in the short term and customers in the longer term. That is the way the system works. It has been really effective in driving up efficiency and productivity in the water industry and driving up service standards.

Q108 **Sir Bernard Jenkin:** My last question: could you just encapsulate the fundamental change in Government policy that you want, in order that you should make more of the kind of investments you want to make?

Colin Skellett: I think Richard mentioned it at the start, but it is in the strategic direction that is given, to say that resilience must be one of the primary factors when Ofwat is looking at the price reviews and the price set. We have always spent the full amount that Ofwat allows us on infrastructure expenditure. In this five-year period, we will spend £100 million less, because that is what came out of the determination, whereas we should be spending more. It is the Government saying, "Resilience is important and carbon neutrality is important, and those are the things that need to be built into the price review."

Chair: Thank you very much, Sir Bernard. I will turn now to James Wild

MP.

Q109 **James Wild:** Good morning, everyone. I want to focus on sewage discharges. In 2013, the then water Minister, Richard Benyon, wrote to all the chief executives calling for you to introduce monitoring by 2020 for all the combined sewer outflows that you have. As we are in 2020, could each witness in turn, perhaps starting with Mr Emmott, tell the Committee how many CSOs you have and how many you have put that monitoring equipment into?

Richard Emmott: I will write back to the Committee with the precise number of CSOs, but I think we have put in EDM—event duration monitoring—of the sort you are referring to into approximately 75% of those, which I think is a higher proportion than we are actually required to by regulation through the Environment Agency. The figure is approximately 2,000 CSOs in Yorkshire.

Richard Aylard: We have a smaller number of CSOs. We are going to fit 470 event duration monitors, of which 460 are currently up and running, so there are 10 more to go in. We will also be fitting another 250 over the current five years, which are not technically required but will tell us what is happening at the start of the works as opposed to at the end. The vast majority of the event duration monitors are now in and working.

Q110 **James Wild:** What would that be as a percentage, just to compare it with the Yorkshire figure?

Richard Aylard: I would have to write to you with that number. I am sorry.

Colin Skellett: I will get you the precise numbers, because I don't want to give you a number that is not correct. We are gradually working through our CSOs, but, as you are aware, there are a very large number of CSOs. We are focusing on the CSOs that potentially cause pollution problems, so we are working through CSOs on a programme basis. I will either give you the precise numbers in a moment or write to you with them.

Q111 **James Wild:** That's fine. I appreciate that you may also not have this piece of information to hand, but if you are able to provide an average cost for the installation of these monitoring devices for each company, that would be useful for the Committee.

I want to turn to Thames Water, looking at some of the performance here. There was recent reporting of discharge into the River Lea 91 times, lasting more than 1,000 hours, from the overflow pipe at Mulberry Court in the last year. Is that level of discharge acceptable?

Richard Aylard: No, it is not, and we have a big investigation going on to work out whether those numbers are correct, whether there was a fault on the monitor, whether we had a blockage in the system or whether something else has been going on. That particular piece of the network is particularly complicated, in that it flows in and out of other networks

before it reaches the Channelsea creek. As I say, we are investigating that.

Q112 **James Wild:** There is also an example at High Wycombe, where in 2019 there was a spillover 295 times, for a total of 6,398 hours. Again, is that acceptable?

Richard Aylard: It is not acceptable, in terms of public opinion, and it is not something that we want to happen. We detest sewage going into rivers. However, the system is set with preset overflows, exactly like the overflow from a bath. If you leave the taps running, you won't get water on the floor; just before it overflows, the water goes down the overflow. Those are preset overflows, and they occur to protect houses from flooding. In areas like High Wycombe they are particularly prevalent when there is high groundwater following long periods of rain, which is what happened there. The way to solve the problem is to reduce the infiltration of the groundwater into the network. First of all, you have to find out where that water is getting in, and in some cases it is not even in our pipes; it is in private pipes that are connected to our network. A lot of work is going on to reduce infiltration, dealing with the problem at source.

Q113 **James Wild:** The test for this is exceptional circumstances, but I also have another example on the River Chess, which you will doubtless be familiar with, where there have been long-running problems. The River Chess Association says that, back in 2014, Thames Water was tasked with fixing this problem, but little has happened in the past six years. Are you confident that your company is taking action to make sure that these discharges only happen in exceptional circumstances?

Richard Aylard: Yes, and the way to deal with that is to reduce the infiltration, which is why there is a big piece of work going on across Chesham, working with the River Chess Association, the local authority and other stakeholders, to work out where the infiltration is worst and what we can do about it. That work is going on, and we are prioritising the Chesham area as one of our big pieces of work over the next two years. Sewer relining is already taking place, and there is a lot more investigation going on to try to work out how we can reduce the volumes arriving in the works. The works has actually been treating more than it was designed to do, but it just cannot cope with all that is coming in through the network.

Q114 **Chair:** Thank you. Mr Skellett has his hand up, I think because he has the figures—just to alert you to that, Mr Wild.

Colin Skellett: We have 1,292 CSOs. We are currently monitoring 75%, and we will have 100% completed within the next three years.

Q115 **James Wild:** Thank you. I will stay with you, Mr Skellett. In the last year, twice as much untreated sewage was released as in 2018, for a duration of more than 100,000 hours. Are you confident that that is only happening in exceptional circumstances? The public are naturally concerned that rivers are being filled with untreated sewage.

Colin Skellett: Rivers are not being filled with untreated sewage, but I absolutely agree that putting sewage—however much, and however

diluted it is—into a river is not a long-term acceptable position. However, as Richard says, this is the way that the sewer networks have been built. They have been built with overflows included. The overflows are licensed by the Environment Agency, and we operate within those licences.

However, to go back to my fundamental point, we need to invest more in infrastructure. We talked about the need to invest in water mains. If you look at the sewerage network, the assumption at the moment, at this rate of investment, is that sewers will last for about 800 years, but they will not. We need to invest seven times the current amount into the sewer network to gradually improve the quality of it and, over time, to eliminate the CSOs. We should have a programme of work, which should be part of the resilience programme.

Of course, climate change is making things worse. On one side, we recognise that we get longer, drier periods. However, we get the same amount of total rain, which means that it comes harder and faster, and there is more of it. That leads to overflows operating more often. It is not a satisfactory situation, but you need investment to make the change.

Q116 **James Wild:** I will come to Mr Emmott, because I wouldn't want you to miss out on the opportunity. According to Yorkshire Water's figures, there were over 600,000 hours of overflows in the last year. Again, it sounds like the bar for exceptional circumstances should be higher than it is, when we have seen increases in these discharges.

Richard Emmott: First of all, Mr Wild, I need to make an apology. That 600,000 figure is inaccurate, and the environmental information request that *The Guardian* submitted to derive it was incorrectly replied to. The actual figure is about 100,000 hours, so my apologies for that. Even though that is a lower figure, we would clearly like it to be much lower still. What you are seeing is a changing level of tolerance from the public to the release of storm discharges into rivers. They simply will not accept it at the level that was once the case.

There is a particular issue in our area in Ilkley, where the residents are looking to have the water there given bathing water status. It would be the first inland bathing water designation in the UK. There is an issue with some intermittent discharges from CSOs that go into that river, which we need to resolve. As Richard Aylard was saying, in that particular case we have identified three areas of surface water infiltration into the network. It is complex to remove them, because that requires some capital works with the local authority. Ultimately, we need to have less surface water going into the sewer network. That would mean that we are not spending money treating water that does not need treating, and we would be discharging less into rivers.

Q117 **James Wild:** Thank you for correcting the figures. Notwithstanding the fact that that data was incorrectly publicised, do you welcome the transparency from The Rivers Trust and its interactive website? People can go on, have a look at their local river, see where discharges are coming in, and bring pressure to bear. I take the point about investment.

They can also contact their politicians, who obviously have a role in the regulatory framework and some of the issues relating to investment, which Sir Geoffrey touched on earlier.

Richard Emmott: Transparency is really important, in terms of building public confidence. Even when the performance doesn't actually look great, it is very important to be transparent. To give you an example, in last year's environmental performance assessment, published by the Environment Agency, we went down from three-star status to two-star status. That will go up again this year, I am pleased to report to the Committee.

The decision that we took at the end of that was to publish all the data that underpinned the Environment Agency's analysis, because we felt that it was important to demonstrate what we were doing to resolve the situation. That involved, for example, the publication of five years' worth of investigations into category 3 pollution incidents. We will publish all the EDM data that you referred to shortly on a live and dynamic basis. Transparency and open data have a really big role to play here in shining a light on how the system works, and on some of the difficulties of long-term investment that Colin mentioned.

Q118 **James Wild:** I want to come on to chalk streams, which was a fairly large focus of our hearing with the Environment Agency and DEFRA. This is perhaps for Mr Aylard. Do you agree with the chief executive of the Environment Agency that chalk streams face a clear and present danger?

Richard Aylard: Yes, I do.

Q119 **James Wild:** Do you think Thames Water is acting rapidly enough to protect and preserve our chalk streams?

Richard Aylard: Yes. We have done a lot, actually. The prevailing narrative is that we are taking more and more water out of chalk streams, and that is why they are drying up. Actually, the reverse is true. For the Chiltern chalk streams, we reduced our abstractions by two thirds, and when we close the abstraction at Hawridge on the Chess, by the end of this five-year period, we will have reduced our Chiltern abstractions by 80%. There is a lot going on in the chalk streams, and reducing abstraction is a really important part of that. There is a cost to our customers. Taking away the Hawridge abstraction, which serves people mainly in Tring with 8 million litres of waters a day, will cost £40 million.

We need to think carefully about how we spend our money to get the most efficient solution. It is not always about reducing abstraction. There are also changes in land use, historic dredging and the run-off from roads. There are a lot of problems with chalk streams that need to be looked at holistically. That is why we are working with a number of Chiltern chalk stream groups to try to work out what good would look like for the Chiltern chalk streams today, and what actions need to be taken to get there—there is collaboration between us, the Environment Agency and Ofwat. Central to this is getting the environmental ambition clear—how

good is good enough, what is the most efficient way of getting there, and how quickly can we do it?

Q120 **James Wild:** Within the next five years you have a number of specific projects that are going to be funded.

Richard Aylard: Yes, we do. There is the £40 million to reduce the abstraction at Hawridge. There is also reducing abstraction on the River Cray in south London, and there are a number of investigations trying to work out exactly what is happening. It is not always quite as simple as saying, "If we took 8 million litres a day less, there would be 8 million litres a day more in the river". That is not necessarily true, because of the way the underground geology works. So we need to work out exactly where we are having an impact and how we can best spend the available money to get the situation sorted out.

Q121 **James Wild:** Thank you very much. Would either of the other witnesses like to come in on chalk streams?

Colin Skellett: Can I do two things? First, can I give you the cost of overflows? The average cost of installing an overflow monitor is £160,000. On chalk streams, we have reduced our abstraction licences by 35 megalitres. The impact on chalk streams is about 10% of our total abstraction. Like Thames, we are working with the various chalk stream organisations to make sure we do not adversely impact on chalk streams. But the problem is going to get worse as climate change kicks in. I hate to keep coming back to this, but the longer and drier periods—the bigger the impact. We have made a lot of progress and we do not have a lot of the problems that we used to have, but that does not mean we can stand still. We need to do more to reduce the water consumption and water abstraction going forward.

Q122 **James Wild:** We will move on to consumption shortly. Richard Emmott, do you wish to add anything?

Richard Emmott: The geology of the north means that we have relatively few chalk streams in Yorkshire. There are a few in east Yorkshire—Driffield Beck and Gypsey Race near Bridlington—none of which we actually abstract from. Clearly, there is a potential impact from our groundwater abstractions in the chalk aquifer in that part of Yorkshire, and we are investigating, particularly with the EA, the impact on Gypsey Race near Bridlington, but we believe it to be relatively modest.

James Wild: Okay, thanks. If we can move on to water consumption—

Chair: Before you do that, Mr Wild, I want to bring in Sir Geoffrey Clifton-Brown, and then I will bring in Sarah Olney.

Q123 **Sir Geoffrey Clifton-Brown:** My Aylard, on the point made earlier about the declining quality of these chalk streams. I must be very careful how I use the term "chalk streams" because I got into trouble with my constituents last time. My rivers in the Cotswolds are limestone rivers, not chalk streams, but it is the same chemical base. As you know, we have lots of limestone rivers in the Cotswolds, including the Coln and

Windrush. I have a particularly persistent constituent, Ashley Smith, who is quoted in the *Guardian* article that Mr Wild quoted. Mr Smith is particularly exercised by discharges into the Windrush. It is not just combined sewer outlets that he complains about; it is the use of the storm discharge provisions that you have in your licences. My constituents feel that you are using those provisions excessively and in conditions that do not really apply because there is no legal definition of "storm discharge". Can you comment on that, please?

Richard Aylard: Yes, I know Mr Smith very well. I talk to him on a regular basis.

Sir Geoffrey Clifton-Brown: I thought you would.

Richard Aylard: That is an interesting piece of collaboration with a very well organised local group that is very concerned about a real issue. The situation there is that our works are required to treat a minimum amount of flow before they discharge to the storm tanks, and then, when the storm tanks are full, from the storm tanks to the river.

All through this winter, our works on the Windrush have been treating significantly more than their minimum flow. The remainder has gone to storm tanks and has gone to the river, which we very much regret. We do not believe it is illegal.

What are we doing about it? I have already been talking to Mr Smith and explained to him that in this five-year period we are going to expand the treatment capacity of Witney sewage works, which is the one he is most concerned about, at the bottom—I know that is not your constituency, but it is the same river—by 50%. At the same time, there is, as I mentioned, the infiltration work in Chesham. There will also be work to reduce infiltration not just at the bottom of the Windrush but also for Bourton-on-the-Water, which I know is in your constituency and a matter of concern. There is a lot going on. We do not believe we have been acting illegally, and what has been happening has been, as I mentioned, to do with the pre-set overflows during and following very, very high levels of rainfall.

Q124 **Sir Geoffrey Clifton-Brown:** The legal limit is one thing; what is acceptable is another thing. the sewage works in Moreton, which you know I have been complaining about for at least 10 year. There, you have a settlement field surrounded on three sides by houses and, when it is full, it discharges into the river. This sort of arrangement cannot be acceptable in the 21st century. I know you are constrained by the Ofwat settlement, but—I will ask you and then all the other witnesses—has enough attention been paid over the years, in investment, to the quality and level of discharges into these chalk and limestone streams? We have 85% of them in the world, so they are very precious habitats. Shouldn't they get much greater attention from your company?

Richard Aylard: Yes, they should, but we have to work within the available funds for investment. I can tell you that Moreton-in-Marsh sewage works will have its storm tank capacity significantly expanded during this five-year period—

Sir Geoffrey Clifton-Brown: Hooray! I have been pushing for it for 10 years.

Richard Aylard: Yes, and your voice has been heard, Sir Geoffrey. We also need to be very careful that we do not always apply the money where people are most articulate and shouting loudest. We have to have a cost-benefit analysis across the area to ensure that we spend money in the best way for all our customers.

Q125 **Sir Geoffrey Clifton-Brown:** Mr Skellett, can I ask you about chalk streams? You have quite a lot in your area as well. What are you doing to address the quality of discharges that are, I would suggest, above the legal limit that Mr Aylard was talking about?

Colin Skellett: We do not have a significant number. The biggest impact on chalk streams in the Wessex area has been abstraction, so it has been quantity rather than quality. There are some wider quality issues associated with run-off. One of the things we have been working hard on is finding sustainable ways of working with the agricultural community and others to manage that run-off, but we do not have a significant quality problem caused by our discharges. That is not to say that the quantity issues will not get worse as climate change develops, but it is more a quantity than a quality issue.

Q126 **Sir Geoffrey Clifton-Brown:** I am interested in your answer, because in the article that Mr Wild quoted from *The Guardian*, your spokesman said, "As CSOs should only operate during periods of intense rainfall, any foul water released from them will be very dilute", yet in a previous answer, you said it would take three years to fully fit monitors to all your CSOs. I wonder whether you are actually on top of this problem.

Colin Skellett: We are absolutely on top of it. As I said, we have 1,200 CSOs, but CSOs do not just affect chalk streams; CSOs affect all water courses. Monitoring tells us what is happening, but as Richard said, the overflows are set to comply with the Environment Agency licences. Now, you can argue about whether the licences are correct or not, but we discharge in line with the licence. If we do not discharge in line with a licence, we get prosecuted, and rightly so.

Monitoring is helpful, because it tells us when a CSO is operating. More importantly, it also tells us if a CSO is operating when it should not be operating—if there is a blockage or something, that then causes a CSO to operate. The biggest cause of blockages are damned wet wipes, which we may come on to at some point. CSO monitoring is important, but the actual level and setting of them are to comply with the licences set by the Environment Agency. The long-term answer is get rid of them, absolutely, but that requires a long investment programme to work your way through it.

We have talked about inland bathing waters. We have got one just round here that featured in *The Guardian*—Warleigh Weir, which is just along from here. It would be great to have an inland bathing water there, but upstream of Warleigh Weir are about 60 sewage treatment works that

discharge, and there are also about 160 overflows that discharge into the River Avon, and you have a lot of agricultural run-off and unsewered properties. These are not quick-fix answers, but it is investment that you need in the long term.

Q127 **Sir Geoffrey Clifton-Brown:** I understand that. A very quick answer to this very quick question: is that information from your monitoring devices available in the public domain?

Colin Skellett: Yes. We were the first company to put up public information about overflows that affect beaches, and the rest of that information is all publicly available.

Q128 **Sir Geoffrey Clifton-Brown:** Richard Aylard, our report makes reference to the Department making grants available to the value of £882,000 to charities and stakeholder groups for improving the environment and the habitat of chalk streams and limestone rivers. Are you working on any of those schemes with the charities involved?

Richard Aylard: Yes, we work with a lot of charities. We work with the Chilterns Chalk Streams group, the River Chess Association and Action for the River Kennet. We are involved in a number of those programmes, and we do it through catchment partnerships that bring together all of the stakeholders around a particular river and try to look for solutions that achieve more than one benefit. We are looking collaboratively. We have what we call smarter water catchments. There are three that we are working on: the Evenlode, the Crane and the Chess. In each of those, we are working with local people to build a catchment plan that will get the best improvement for the river for all the stakeholders.

Q129 **Sir Geoffrey Clifton-Brown:** That is very helpful, thank you. Mr Emmott, are you involved in any of those types of collaborative schemes? I can't remember how many chalk or limestone streams you have in Yorkshire, but you must have a few.

Richard Emmott: We have relatively few chalk streams in Yorkshire, and they are mainly over in the east of the county, where there is a northern belt of chalk, just north of Hull and Bridlington. I think you will find that most water companies are pretty closely involved in the sort of partnerships that Richard mentioned.

I will pick on two that we have in Yorkshire, which aren't to do with chalk streams. We work very closely with the Aire Rivers Trust on a programme that has partly involved trying to reintroduce migratory fish to the Aire—salmon and sea trout. That involves working with the Environment Agency to remove weirs, introduce fish passes, improve grazing and reduce discharges from CSOs.

We have had a similar project in the River Don catchment, which we are about to extend into some natural flood management work with the Sheffield city region and Sheffield City Council. I think you will find that way of working in partnership with river trusts and environmental organisations is pretty widespread throughout the sector.

Sir Geoffrey Clifton-Brown: Thank you all very much.

Q130 **Sarah Olney:** My questions are for Mr Aylard and Thames Water. Back in January, there was a major water leak in one of your pipes in my constituency. The pressure from the leak forced a leak in a nearby gas pipe, and water then flowed into the gas system. Unfortunately, that took place on a rather steep hill, so it then flowed into quite an extensive part of the gas network in Richmond. As a result, 1,500 households were without heating and hot water for up to nine days, and several hundred thousand litres of water had to be piped out of the gas system. We had some very vulnerable people without heating and hot water for quite an extended period of time in January. It was a major clear-up operation—chiefly for Cadent, the gas supplier in the area.

Residents tell me that they reported the water leak quite promptly on the Thursday night, but that Thames Water did not do anything about it until at least Saturday morning, by which time a huge amount of damage had been done. Do you think that that was an acceptable response by Thames Water?

Richard Aylard: I would need to check the facts of that case. I am aware of the incident and that it was hugely disruptive. As for when it was reported and when we started work on it, I can look into that and write to you. It doesn't sound right. If we get a leak reported, and if there are potential serious consequences, we should get it sorted as quickly as possible. Nobody wants to leave people without water and, more importantly, heating in January.

Q131 **Sarah Olney:** Obviously, water leaks can create massive negative externalities. In this case, it was the loss of gas to many houses, but we are all familiar with burst water mains creating traffic disruption and other externalities. To what extent are you, Thames Water, taking more responsibility? Or do you think that you are taking the responsibility you should for dealing with some of these negative impacts elsewhere?

Richard Aylard: Yes, and we have worked very hard to improve our incident response over the last 18 months. The feedback we have been getting is that that has been successful. We have completely overhauled our incident response and our gold and silver command structure to ensure that we respond as quickly as possible. When we do have incidents, we have been building up the number of customers on our priority services register, to whom we will deliver bottled water; we will make sure that they are looked after if they cannot get out and collect it for themselves. We have also managed to reduce the incidence of people who are without water for more than four hours by 50% over the last two years, so big improvements have been made there.

The problem is when the really big water mains burst—what we call trunk mains, which are high-pressure, high-volume pipes. Of course, we have lots of those in London, so we get the really devastating consequences. There is a lot more work going into monitoring the condition of those big trunk mains. It is quite difficult, because they are buried 6 metres to 8 metres below ground in the clay and surrounded by other services, so

surveying their condition isn't easy, particularly when the corrosion occurs from the outside rather than the inside, but a lot more work is going into that.

The long-term answer is that we have to replace more of those trunk mains, because as Colin Skellett was saying, we are looking at replacement periods of hundreds of years. Of our trunk mains in London, 14% are more than 150 years old. They are not going to go on forever, but replacing them is very disruptive, very expensive and requires very careful planning. Indeed, it requires a plan that goes beyond one five-year period. We basically have to replumb quite a lot of London, and that needs to be planned for strategically over a long period of time.

Q132 **Sarah Olney:** We are going to speak a bit more about leakage later in this session. What I really want to know about is, as I said before, these externalities. It must have cost you a great deal of money to make good the damage done by the leak in Richmond in January. I am not going to inquire about specific figures for that, but I am interested to know whether you have a figure for the liabilities you incur to other companies for the damage that your leaks do to them and to wider communities.

Richard Aylard: Yes. I can give you a figure for how much we have paid out in insurance costs over the last year, and, indeed, the amount that other contractors have had to pay out to us when their diggers have gone through our water pipes. It works both ways, particularly in London, where you've got very complex networks underground. There certainly is a cost there, and it is a consequence for us. That is another reason why we have to get on and make the investment: to ensure that these things do not happen and cause all the disruption to customers.

Q133 **Sarah Olney:** I am not aware of—it may be that I just don't know—what compensation, beyond making good the damage, has been offered by Thames Water to the residents in Richmond who were impacted by this.

Richard Aylard: I will have to look into that and write to you about it.

Q134 **Sarah Olney:** I would be grateful if you could send me a letter detailing exactly what you think happened in this incident, and the steps that Thames Water has taken to make good the damage, and to compensate.

Richard Aylard: I will happily do that.

Sarah Olney: Thank you very much.

Q135 **James Wild:** Happy birthday to the Love Water campaign, which is one year old this month. Could you tell the Committee what difference that campaign has made over the last year? Perhaps Mr Emmott would like to lead on this one.

Richard Emmott: Thanks for that hospital pass, Mr Wild. It was a very well phrased question, if I may say so. Let me try to shed a bit of light on this.

I was involved a little bit at the outset in some of Love Water's thinking, and I think it was, at heart, a sound concept. However, it was not backed by any resources, and it was effectively driven by a committee of too many people, which meant that it was not particularly agile. The branding was a good idea, but it tried to do too many things. It was too diffuse and should have focused on some well-delivered regional pilots. We were very keen to run a pilot of the brand in Yorkshire and would remain open to doing so. It does raise some interesting questions about the relative roles of companies, Government and the collective of companies in communicating reductions in water demand and encouraging customers to use water wisely.

My view is that Government's role in this area should be to introduce mandatory water efficiency labelling on white goods. It should be to change the building regulations in the way that Colin mentioned. You would kind of change the structure and framework by which water is used in households, either through new development or through white goods. It is the role of companies, predominately, to communicate with their customers on a localised basis about how water could be used more wisely in their area. Let me give you an example of how we have done a little bit of that in Yorkshire.

In 2018, we had a significant drought in the north, which lasted for several months. What we experimented with there was what I called data-driven, hyper-local communications. Now, that sounds a bit like jargon, and I am well aware of that, but we would use consumption data in particular areas, and also look at water demand and how that was being driven by prolonged hot weather, and then focus in on the areas where we needed to concentrate communication. That was really very effective, because it was relevant to people. It wasn't lecturing; it was asking them to help, rather than telling them to do something. I will happily share the case study with the Committee. Other companies have done some excellent work on behaviour change—

Q136 **James Wild:** Sorry, could I focus on the Love Water campaign for a moment? It has posted some tweets, but there is no funding or campaign plan. It seems very green, from the hearing we had before. Is this a live campaign, or has each company decided that they are not actually going to stand behind it?

Richard Aylard: First of all, as Richard Emmott says, it is local communications to customers in a particular area about a particular problem that has the most impact. This spring and summer, with the high demand from covid, we have spent £160,000 on local communications, and we have another £300,000 that is signed off and can be spent on a day-by-day basis with social media, local newspapers and local radio, drawing attention to individual problem areas where we need some help in reducing demand. Demand has dropped off in the last few weeks, but we are ready to go with that as and when needed.

At the same time, the industry has set up a campaign with Waterwise—the independent water efficiency organisation—called Water's Worth Saving,

and that is funded to around £300,000 for national, overarching communications about the problems that we are all experiencing with more customers working from home during covid. Water's Worth Saving, plus the local company actions, is what is going on at the moment.

Q137 **James Wild:** Okay. That is helpful, but it begs the question, which I am not asking, of why this campaign was created a year ago if it is all going to be local.

I will move on to other measures that obviously do have an impact. On the report, we heard statistics on the proportion of households with meters. South East Water has the highest level, at 87%. Thames is languishing near the bottom of the table, at 47%. What are you doing to increase that, and what is your target for metering?

Richard Aylard: We are fitting smart meters. We have 450,000 of them fitted already, and we are going to be taking that up over the next five years, getting to 75% by 2030. Those smart meters are an absolute game changer in terms of understanding demand and leakage. From the existing [2] meters, we get 10 million data points every day that tell us a huge amount about where water is being used, being wasted and being leaked. For instance, we have now been able to prove that some of what we assumed was leakage—because leakage is an estimate, rather than a measurement—is actually wastage and usage inside properties. When we find that, we can get in and help homeowners to use water more wisely, we can fit water-saving devices and we can really get their demand down. People on smart meters use around 17% less than unmetered customers, so there is a really big win from fitting those smart meters.

Q138 **James Wild:** What is your assessment of consumer awareness of the fact that we are leaders in Europe for the amount of water used every day per person? What proportion of your customers do you think would know that statistic—know that we are the highest users?

Richard Aylard: I don't think that very many of them would know it, and, if I'm being completely honest, I'm not sure many would be that interested. They are more interested in knowing whether they are using more or less than their neighbours in the local area. Whether they are using less than the French or the Belgians isn't something that is going to bother individual customers.

We also have to recognise that there are things working in the opposite direction. In the hot weather in May, if you had children at home, you could go online, order a 4,000-litre paddling pool, have it delivered within 24 hours and fill it for £4.50. Every time you empty it, you are using the same amount of water as eight households use in a day. You can see why demand suddenly went up. We have to educate people: "By all means fill your paddling pool, but when it is time to empty it, please will you use the water to water your plants, and please will you not empty it every night and refill it every day?".

[2] Thames Water would like to clarify that in reference to this sentence, they meant existing smart metres.

Q139 **James Wild:** One of the reforms to the regulatory system that does not seem to have made an impact is in relation to non-domestic customers and introducing competition. The take-up there has been incredibly low. What would you say are the structural barriers or things that should change to increase that figure, or do you think that that figure is never going to increase?

Richard Aylard: I know there is a piece of work going on, involving the non-household retailers, Ofwat and others, to work out what can be done. I don't have a particular view on it, but what I do have a view on is the fact that the non-household retailers are not making any significant effort to increase the water efficiency of their non-household customers, so we are going in and doing that work for them, because we need to save the water. The water that we save in non-household premises does not count against our per capita consumption target, because we have this target only on household use, so we are not actually picking up the non-household through that metric at all.

We have tried to offer incentives for non-household retailers to offer water efficiency savings for their customers. We made it very simple, but none of them has yet managed to make a successful bid for that.

Q140 **James Wild:** This is the final question from me. In our report, we recommended that DEFRA publish annual league tables showing water companies' performance on reducing consumption. Would you support that?

Richard Aylard: Not if it's around per capita consumption. We would be much more interested in doing it around what we call distribution input. It's a basic tenet of good regulation that you should try to regulate and encourage outcomes, and the outcome we all want is to take less water out of the environment. It is not necessarily to get people to use less; that is one part of it. If we had a target around how much water we take from the environment, you would bring together domestic consumption, non-household consumption and leakage, and you would have a meaningful target about how much water you were or were not taking from the environment each year.

The other thing to talk about is that per capita consumption varies, depending on the circumstances of the customer. People with large gardens, for instance, are going to be using more per capita than people living in flats or terraced housing. Again, there are issues for different companies on that.

Q141 **James Wild:** And *[Inaudible.]* have made those comments, but putting aside the precise metric, the annual league table transparency is hopefully something that you would support. I think Mr Skellett wanted to come in on these points.

Colin Skellett: Just a few fundamentals. The best way is to get meters in. Meters reduce average consumption by 15% and peak week consumption by about 25%, so we need to push much harder on metering. So far, we have been metering on change of occupancy, which is an easier thing to

do because people moving in know they are going to have a meter, but we need to push much harder on metering.

I echo what Richard said about working with local communities and working locally to help drive awareness. Social media can have a big part to play. We have probably seen the best of the Love Water campaign—it is more in the dead parrot league at the moment—but I think we can all get behind Water's Worth Saving. We need to get this all joined up—the Government, EA, ourselves and everybody pushing the same message, because this is about awareness. People think that it is not important, but it is really important.

The point that James *[Inaudible.]* made to you last time was that we need to get a cultural shift, so that wasting water is equivalent to blowing smoke in a baby's face. That is where we need to go, to really make a difference. I agree with Richard that league tables of per capita consumption probably won't take you very far. League tables of water being put into supply encapsulates the whole thing, but we ought to have some national targets on per capita consumption, because we are out of line with many other countries. Many other countries do much better than us, and we ought to learn from what they are doing.

Q142 **Nick Smith:** Before I talk about leakages, I have a question for Mr Aylard on water meters. In the most recent data on percentage of households metered, Thames does pretty poorly, on 47%, while your colleague on the screen from Wessex has 66% of households metered. With Thames, why have you been so rubbish at getting meters installed?

Richard Aylard: One of the points is that we have a very high proportion of customers living in flats. The incentive for fitting a meter to a flat, where there is very little discretionary water use—they haven't got a hosepipe, they are not washing the car, they are not watering the lawn, and they are not filling a paddling pool—has been less of a priority for us than companies that have more customers living in homes with gardens. Having said that, we are now catching up and leapfrogging ahead by going for smart meters rather than for the dumb meters that give you only one reading every six months. As Colin says, metering is the key to getting demand down, and also to getting leakage down.

Nick Smith: Thank you. So we'll see. We will all be interested to see your performance over time on that.

First of all, good morning. It is a modern wonder that you guys get safe water through people's pipes across the country; it is absolutely brilliant. But my interest has been sharpened this morning, because last Friday evening I went to see a constituent in a place called Nantyglo. They have just recently moved in there, and they showed me a leak that is being channelled through the wall from next door. An engineer told them in April that 2,000 litres an hour are escaping from the leak—it is gushing through the wall. I said, "Gosh, how long have you known about this?" They said, "We've moved in in the last six months. We reported it in April, and nothing has been done." I turned to the next-door neighbour and they

said, "It's been like that for 19 years." So then I asked my researcher to do a calculation: 2,000 litres an hour times 24 times 365 times 19. Anyway, 330 million litres later that fills over 100 Olympic-sized swimming pools, so my constituents tell me that they have been fobbed off. They think the water company in Wales, Welsh Water, which I will be writing to today about this, has been too slow, and they think that your performance should be linked to your salary.

I will come on to salary later, but I want to talk about performance on dealing with leakages first, please. I am going to use for facts the table that has been produced on the daily volume of water lost through leakage. Again, Mr Aylard, Thames are the bad boys because you are the worst performer, with 22,200 litres lost per kilometre of pipe daily. Mr Emmott, you are middling at 9,100. Mr Skellett, you are the good team here with 6,500.

Chair: For the witnesses' sake, I believe that you are referring to table 1 in the National Audit Office Report—is that right? Maybe Keith Davies could correct me if I am wrong on that. This is going back to the original NAO Report.

Q143 **Nick Smith:** That is really helpful, Chair; thank you. This is a league of shame. It needs sorting out, because my constituents in Nantyglo are really cross about this, and I am cross on their behalf. Listening to your evidence so far this morning, you, Mr Aylard, said, "There's a lot that we don't do," and broadly you are telling us that you are going to do better in the future but you are shackled, really, by Government and the regulators. That is what I have been hearing this morning.

For the questions that I am going to ask in this short while, can you concentrate on your performance and improving things, please? Mr Skellett, we will start with you because, compared with your colleagues at least, you have been doing better, but across the piece, to all of you, please, why do you think there has been so little progress in tackling leakage since 2012?

Colin Skellett: Okay, let's put this in context. Over the last 20 years we have taken leakage down in Wessex by 105 megalitres a day. That is about 25% of our output. Leakage still needs to come down further, but we are starting to get to a position where you have dealt with the easy part of it. What causes leaks? People are familiar with the sort of leak that you described where water pours out of something, or a burst. Bursts now are only 20% of our leaks, and we repair all visible leaks within 24 hours, because I do not think that you can ask customers to save water if you are not fixing your own leaks really quickly.

The problem is that 80% of the leaks are either leaking joints or pinhole leaks on the miles and miles of water main that we have, and that you cannot fix by just trying to find the leak because they are so small. It is over the 200,000 miles of main that we have in the UK. That makes it a more difficult one, and 25% of the leaks are on the customer side of the

pipe, so it is customer leakage. We fix the customer pipe free of charge, but it means that you have to be able to find it.

The last thing to say about leakage is that it is not a science but an art, because we do not have full metering. If you had full metering, you would be able to really understand what leakage was. At the moment, we have to make assumptions about the amount of water that is being used by unmetered customers. I come back to the point that we need to invest in meters if we are going to drive leakage down, and we need to invest in renewal if we are going to drive leakage down.

There is a UK water industry report that says that if we continue at our current rate of investment in water mains, leakage is going to go up by about 40% by 2050. I understand your point about leakage, and I understand why customers look at it and say, "How can you possibly lose all this water?" We will continue to drive down leakage, but it gets more and more difficult because the big ones have already been picked off.

Nick Smith: Thank you, Mr Skellett. You are the best performer so far.

Colin Skellett: I think "least worst" was your description.

Q144 **Nick Smith:** Mr Emmott, you are middling. What's your story?

Richard Emmott: Let me start with an industry perspective, if I may. At the end of this month, the industry will publish the annual league table. We have talked a lot this morning about league tables for leakage performance. What you will see when that is published is the biggest single drop in leakage since privatisation—something like 7%—which takes us below the 3 billion megalitres.

Nick Smith: How far below 3 billion, exactly?

Richard Emmott: About 2.9 billion.

Nick Smith: Oh, really? Thanks for that.

Richard Emmott: It is a significant jump. It is still a lot of water, clearly. Leakage is a very good way of measuring the efficiency of a distribution and production system. No one is denying that, and it is something that all companies take very seriously. It is also important to give some international comparisons. The OECD do a range of—

Q145 **Nick Smith:** Mr Emmott, may I interrupt? Could you please talk about your performance?

Richard Emmott: I am talking about my performance, but if you are presenting an image of an industry that is not very good on leakage, I would say that we are bang average as far as Europe and developing countries are concerned. It is about half the rate that you see in Ireland and Italy, for example. With the improvements that we are planning in the next five years of a 15% reduction, that will take us to a world-leading position. That is some useful context. Leakage is a subject that generally attracts more heat than light, and I thought it was worth putting some data behind that.

Our position is that we proposed a 25% leakage reduction in our business plan to Ofwat in 2018-19. That was scaled back to a 15% reduction, because they wouldn't allow the level of investment required. Metering plays a big part in that, as my colleagues have mentioned. There is also a big investment in technology, not just in Yorkshire but in other companies across the sector. Getting an understanding of how the network operates is really important. We have introduced a widespread programme of about 30,000 acoustic loggers, which are listening devices that generate data points that feed back to us. They tell us how the network operates, and help us to identify, find and fix leaks. Thames has done a bigger-scale introduction of acoustic loggers, and United Utilities, over in the north-west, has also made a very substantial investment in that.

What that enables the industry to do collaboratively is share that data and understand, working together, what the best responses are. It is about investment in new technology, understanding the data and rolling out more metering.

Q146 **Nick Smith:** Why didn't you copy what Mr Skellett was doing over there in Wessex earlier?

Richard Emmott: That is a question for my predecessors. I can't really go into that. It is also important to recognise that the way in which the regulator and the Government look at leakage has changed decisively in the last few years. Traditionally, the amount that you would invest in leakage was driven by a concept called the sustainable economic level of leakage. That basically looked at the marginal cost of reducing leakage and set it against the cost of introducing more water into the system. Because water is a relatively cheap commodity, that meant that it was not deemed to be economically viable to reduce leakage beyond the level that you have seen in the last five years. That policy changed in about 2017-18, and that has resulted in the more ambitious leakage target.

Q147 **Nick Smith:** Okay. We will come on to that later. I have a further question on that, but that is really helpful. Mr Aylard, why weren't you copying what Mr Skellett has done?

Richard Aylard: We have been working hard to get leakage in London down, but leakage in London is a little bit more difficult than leakage in Wessex, because you are working under congested city streets and dealing mainly with much older pipes. Those are not excuses. You asked for some facts. In the last year, we have got leakage down by 15%. Leakage in our area is now the lowest it has been since records began in 1989. That is progress—15% in a year, and we are going to do a further 20% across the rest of this five-year period. There are big challenges there, but we are—

Q148 **Nick Smith:** Sorry, can I interrupt? You have made a 15% improvement in one year, but then you want to do a 20% improvement over five years.

Richard Aylard: The 15% in one year was catching up for three years of missed targets. We have had to work absolutely flat-out to get leakage

down by 15%, but it gets more difficult. The more you reduce leakage, the more difficult the next incremental bit gets and the less effective it is just to go around finding and fixing leaks. We are fixing 1,400 leaks every week at the moment, and we will keep doing that, but we also need to replace a lot more of the old mains, which gets rid of the pinholes in the pipes that Colin Skellett was talking about. The big game-changer there is metering, because it means we can find out where the leakiest areas are, we can find leaks on individual properties and we can help homeowners to fix them. Around one third of our leakage is on our customers' pipes.

Q149 **Nick Smith:** We have already discussed the fact that you are still only on 47% when dealing with meters.

Richard Aylard: Yes, and meters are going in very fast to get that number up. There are smart meters going in, which are much better at finding leakage.

Q150 **Nick Smith:** Turning to the support, guidance and prodding that you get, what have DEFRA and Ofwat done to support leakage reduction?

Richard Aylard: Is that to me, Mr Smith?

Nick Smith: Yes, we will start with you, Sir.

Richard Aylard: Government, first of all, have said how important leakage is, and there is a long history of Government doing that, going right back to John Prescott, I remember. Government have consistently talked about leakage. There has been a move away from that sustainable economic level of leakage, which was always incredibly difficult to explain to customers and which we all hated. As Richard Emmott said, that changed in about 2017, so there is plenty of "encouragement" from both DEFRA and Ofwat to get leakage down further and faster.

Q151 **Nick Smith:** What carrots or sticks should Government or your oversight body use to get you to work harder on this?

Richard Aylard: I am not sure we can go harder than the targets we have set for ourselves for the next five years. I think the Committee has already asked whether those targets are achievable, and we believe they are, but it is a tough ask. I am not sure we can go further in the next five years. What we need to do is to look not at the next five years, but at the next 25 years. If we patch a pipe, we get a saving for this year and then it leaks again next year. If we replace the pipe, we have benefits for the next 15, 20 or more years, but of course that is more expensive, and that is where you need to take a strategic look at the problem.

Q152 **Nick Smith:** Mr Emmott, come in on that, please. What could DEFRA do better?

Richard Emmott: I will mention one specific point, which is more for Ofwat than for DEFRA: removing some of the perverse incentives that you see within regulation. One of our tactics for reducing leakage in the next five years was increasing the number of mains repairs that we do, driven by some of the data we generated earlier. We actually get penalised for

the number of mains repairs we do, because Ofwat regards that as a negative indicator on asset health. Therefore, we are financially disincentivised to repair pipes and to fix leakage. If you fixed that disincentive or perverse incentive from regulation, it would make a substantial difference.

Q153 **Nick Smith:** Mr Skellett, today's caped crusader—what would you ask of DEFRA?

Colin Skellett: I think I am more a Robin. There are two things DEFRA and Ofwat could do. I think that Ofwat's setting targets has been good at driving down leakage, but we need two things. We need a commitment on metering. We ought to set out a programme that says, "Over the next 10 years, we are going to move to much more widespread metering." Why on earth would you think it is sensible to charge people on the basis of rateable value that was set in the 1980s, or whenever it was—not even on the council tax value? Why on earth would you do that? Why wouldn't you move people on to meters?

We should have a real push on meters and then accept that one of the things we have to do is to start to invest more in the pipe network. We could also look at the customer communication pipes, because although they belong to the customer, we largely fix them. We could look at whether they should transfer to the ownership of the water companies so they become part of the public water network. So there are three things there. They will not fix it overnight, but they will make a big difference over the next 10 years.

Q154 **Nick Smith:** Can I probe further? Are the targets you have agreed with Ofwat for tackling leakages realistic, or do you think they are untested approaches?

Colin Skellett: We have a 15% target. Can we achieve it? Yes, if we throw lots and lots of money and resources at it. Would it be better, as Richard Emmott said, to have a look at the perverse incentives that are in there and say, "How do you really want to deliver reductions in leakage in a long-term, sustainable way?" You can do it better than the current methods. The targets are tough, but we will do everything we can to hit them.

Q155 **Nick Smith:** Mr Emmott, anything to add on that?

Richard Emmott: No. I mean, you would expect a target to be stretching, otherwise what is the point of giving a target? If it is too easy, it does not challenge you. With existing technology, we can certainly get to the 15% figure, and companies are innovating all the time to see if we can find out more about our network and use monitoring and data much more effectively. I completely echo the policy point about rolling out more metres.

Q156 **Nick Smith:** Mr Aylard, you were bullish about reaching those targets in the future. Do you accept those Ofwat targets?

Richard Aylard: Yes. We have accepted the targets, and we have to hit them. It is in pursuit of targets that our shareholders spent £500 million more over the past five years than was in the regulated settlement, and it is why they have taken no dividends for the past three years. We have had to hit the leakage target, and the commitment is there to keep on hitting it. We have to do that; that is part of the job.

Q157 **Nick Smith:** All right, thanks. When I talked to my constituent about her experience of Welsh Water and the 2,000 litres an hour being lost, she was really cross. I said I was hoping to speak to you guys today, and she said, "Ask them about their money. How much do they get for their work?" Mr Emmott, you gave a strong answer to one of the questions on transparency and open data earlier on. In 2017, your former chief executive took home £1.3 million a year, including bonuses. How much does your current CEO earn?

Richard Emmott: We had a change of CEO last year. I think the basic pay, which will be disclosed in the report and accounts published last week, was about £450,000, but clearly there will be bonuses and pension contributions on top of that. I will refer back to the report and accounts, if I may, and write to the Committee to give you the precise figures.

Q158 **Nick Smith:** Just to be clear, your former CEO got £1.3 million, including bonuses and other moneys, and your present CEO gets £450,000 plus bonuses and other moneys.

Richard Emmott: Yes. Let me come back to you with the precise figures once I have checked the report and accounts, because I would not want to give the impression that there is a significant change in trend there when I do not know.

Q159 **Nick Smith:** Do you think it is likely to be over £1 million still when you add in all that?

Richard Emmott: I am not going to speculate on that, if you do not mind, but I can come back to you this afternoon with that figure.

Q160 **Nick Smith:** All right, fine. Mr Aylard, I asked my researcher to do a quick search on Google about how much your chief executive earns, and I understand it is approximately £750,000 a year.

Richard Aylard: That is the basic salary of the new CEO, who starts in September.

Q161 **Nick Smith:** Do they have any extra bonuses on top of that? Do they get a car and a driver, for instance?

Richard Aylard: Not a driver. There is a car allowance, yes.

Q162 **Nick Smith:** Thank you for that. Mr Skellett, you actually are a chief executive. I did try to find out how much you earn and I couldn't, so now is your opportunity to be transparent. How much do you get, guv'nor?

Colin Skellett: My base salary is £276,000. My total package from the water business is £445,000, but I also get paid for other parts of the

Wessex Water and YTL group because I look after other things, so my absolute total package is £921,000 all in. From the water business, it is £445,000.

Nick Smith: Blimey, you lot have got a really good trade union negotiator, haven't you?

Colin Skellett: I used to be a trade union negotiator, once upon a time.

Q163 **Nick Smith:** I can tell. A few weeks ago, we had the chief executive of the NHS in front of our Committee. Sir Simon Stevens earns about £200,000 a year; he runs a complex organisation, he has lots of people to oversee, and he tries to make improvements year on year, too. One at a time, please say why you think water company chief executives are paid so much, and whether their performance on leakages should be linked to their salary. If you do not do so well on leakages, should your salary be dropped? Mr Skellett, you are a good negotiator—are you good at leakages? Are you going to keep your present salary or, if things do not improve, will you drop it?

Colin Skellett: My salary has not changed for five years now, but it is a heck of a lot of money. My water bonus is purely dependent on performance—not just on leakage, but on a whole raft of measures, including customer service. That is what determines my bonus. The base salary is the same one I have had for quite a long time. We can always debate who is worth more—Prime Ministers or whoever—but that is what the market is paying me and that is what I am getting. I am happy to hold that where it is and to be remunerated on the basis of my performance.

Q164 **Nick Smith:** I am a strong Labour man and I think everybody is worth more money than the Prime Minister, but that is not what the population thinks. My neighbour in Nantyglo thinks that the guy at Welsh Water, who earns £750,000 a year—when 2,000 litres of water an hour has been leaking from part of her home—gets paid too much. Do you think that is fair, compared with Mr Stevens?

Colin Skellett: The whole debate around pay is a really difficult area. I thoroughly understand why, when people do not get the service they think they should and things like that happen, they react by saying, "Does he deserve that? Does she deserve that?" In the water industry generally, pay is set by independent remuneration committees that reflect the market, and on the whole, we are probably seeing pay levels starting to come down.

Q165 **Nick Smith:** Mr Emmott, should pay be related to performance on leakages?

Richard Emmott: Yes, it should. It should also be related to performance on customer service, environmental performance, net zero and a whole basket of things that we are accountable for—and it is.

Q166 **Nick Smith:** And it is. Do you think that leakages should play a larger part in that basket of performances that you identify, given that it is so important in the public's eye?

Richard Emmott: No, I do not think it should play a larger part; I think net zero is a much more significant part of what we are there to deliver, if I am entirely frank with you.

Q167 **Nick Smith:** Mr Aylard, your chief executive is worth their weight in gold, are they?

Richard Aylard: Yes, I believe that the new CEO, who I met and talked to at length, will be worth what she is being paid. The bonus is heavily dependent on leakage, pollutions and customer service, so all of that is in there, and if we do not perform, she will not get the bonus.

Nick Smith: Okay, we will see. Thank you very much for answering my questions.

Q168 **Sir Geoffrey Clifton-Brown:** Mr Aylard, judging by your performance this morning, perhaps you ought to be new CEO, but that is not for us to delve into. You have done a lot of very welcome work in Cirencester on sleeving pipes. I assume that you have done that throughout the Thames Water area, including extensively in London. That is welcome and does not disrupt the streets by digging up the pipes, but surely there is a balance to be struck between doing that and installing completely new water pipes, which would presumably have a much longer life and therefore reduce the leakage problem over a much longer period.

Richard Aylard: Where we can sleeve pipes, we like to do that. If we can push a plastic pipe inside the old iron main, that is a really good solution. The problem is that in many places we cannot do that, because the pipes have slid apart so that the plastic pipe will not fit in, and in other areas we have too many competing services—everything from broadband to sewers; from gas mains to high-voltage electricity—and it is too dangerous. Particularly in London, I am afraid that we generally still have to dig up water mains to replace them, but where we can sleeve them, we do, because the blue pipe just sits in there. Of course you do reduce the diameter, and therefore the volume of water you can get through, slightly as well. So it is a case-by-case judgment, but it is something that we do where we can.

Q169 **Sir Geoffrey Clifton-Brown:** One final question: I think Mr Skellett mentioned this. Is a key to this leakage problem the pipe between the consumer stopcock and your mains pipes? In other words, who is responsible for that bit of pipe, and is that where a large percentage of the leakages are occurring?

Richard Aylard: It is the responsibility of the customer from where it connects to our mains—so, typically, under the front garden is their responsibility; but we will work with them to try and get it fixed. This is, again, something that meters will pick up very quickly. Where you have got a customer-side leak you can then go to the homeowner, and you can talk about how they can fix it and how we can help.

Q170 **Sir Geoffrey Clifton-Brown:** And who pays?

Richard Aylard: The ownership is with the customer, but if they are going to find it difficult, or if we can help, then we will. In many cases you are working under people's front gardens—under the drive—and they prefer to get the work done themselves because then they have got more of a sort of quality control over it, but we do it case by case.

Q171 **Sir Geoffrey Clifton-Brown:** And does that count towards your leakage figures?

Richard Aylard: Yes, it does. When you compare international leakage figures, it is quite interesting that I think we are the only country in the world that actually includes customer-side leakage in total leakage. So percentage leakage figures against other countries can actually be quite confusing.

Q172 **Sir Geoffrey Clifton-Brown:** I think that Mr Skellett wanted to come in.

Colin Skellett: It is 25%—the connecting pipes are 25% of leakage, in general, so it is a big part of it. We currently offer free leakage repair for customers who have a problem in their connecting pipe. I think one of the things that is worth looking at is whether that pipe should not be part of the public network, rather than in customer ownership. I think it is something that DEFRA and Ofwat might want to put some attention to, because it is a significant part of leakage.

Sir Geoffrey Clifton-Brown: Mr Emmott, do you want to comment on that?

Colin Skellett: Sorry, Sir Geoffrey; I was just going to give you the number I promised you—3.72%.

Q173 **Sir Geoffrey Clifton-Brown:** Thank you very much. Mr Emmott, did you want to comment on this matter?

Richard Emmott: Just to point out that for us, the figure on customer supply pipes is that about 30% of leakage comes from that pipe. I would agree with Colin that the transfer of that asset to companies would be desirable or, should certainly be looked at. Like Richard in Thames, we offer free supply pipe repairs where there is a leak.

Q174 **James Wild:** I commend Mr Skellett for the speed with which he is coming back with these figures that we are asking for. Mr Aylard, just before we move on to net zero, you mentioned a couple of times that the company is not paying dividends to shareholders—for the next three years, I think you mentioned. Can you just assure the Committee that there are no intercompany loans or payments, so that people might look at your accounts and say that that is another way to pay money that might have been paid in dividends but call it something else?

Richard Aylard: No, these are not intercompany loans, but there are interest payments made. What is important is that there is no money going to the external shareholders; it is going to pay interest. I can give you a more detailed note. It is all in our report and accounts, if you would be interested in that.

Q175 **James Wild:** I would be, yes; if you don't mind, that would be helpful. Moving on to net zero, everyone has signed up to it, so I guess the big question is how it is going to be delivered, Mr Aylard—how you will develop Thames's plans for the 2030 target.

Richard Aylard: Three main things: the first thing is to reduce the amount of energy we use. For instance, fitting variable-speed pumps, so that pumps are not just on or off and they only use the energy that they need to, is a more sophisticated way of managing a pumping system. That reduces energy. A big move is bringing in more electric vehicles and potentially using hydrogen for some of our biggest vehicles.

The biggest change that we are going to be making is that we are investigating a technology called pyrolysis. Briefly, the industry has been using anaerobic digestion to generate energy from sewage sludge since the 1930s. We can get about 40% of the available energy out of the sewage sludge. By using pyrolysis, we can get that to 90%. We can also end up with a much more concentrated residue called char, which potentially can then be used in the circular economy, because it has carbon, phosphorus and metals in it. We are investing in a very large plant, which is going to take the waste stream of 200,000 people, to see whether we can make pyrolysis work at scale. If we can, of course that could then be rolled out across the rest of our area, in time.

There are also lots more things. We have the largest floating solar PV array in Europe, on one of our reservoirs. We have wind turbines. There is a lot of work going on to work out how all this will get us to our net zero target by 2030.

Q176 **James Wild:** That is all very interesting and very commendable. Mr Skellett or Mr Emmott, is there anything that you are doing differently that you would like to highlight?

Colin Skellett: Can I come in? All the things that Richard has talked about are really good things to do. One of the advantages of pyrolysis is that biochar is a really good sequesterer of carbon. Over the last five years we have reduced our carbon footprint by 25%, but looking between where we are now and where we need to get to, all the things like electric vehicles and so on will take us part of the way down the route, but we need a fundamental change. Pyrolysis and biochar might produce that fundamental change.

There is another even bigger challenge, of course, and that is embedded carbon. If you look at the total carbon, you have to look at all the capital investment that we make and the amount of carbon that is consumed there. It would be great if we could get the Environment Agency to start looking on a catchment basis and at catchment consenting, rather than point consents. The problem with point discharge consents is that you almost certainly have to put in chemical or mechanical ways of achieving that consent.

We have done some really good work, with the Environment Agency's support, on looking at total catchments and saying, "How do you deliver

the result in the catchment rather than on a point basis?" That would enable you to use much more sustainable solutions, rather than pouring concrete all the time.

Richard Emmott: If I may, Mr Wild, I would add a couple of things to that. As you know, the sector is committed to net zero by 2030. They will be publishing a road map, produced by Ricardo and Mott MacDonald, in September, which we will gladly share with the Committee once it is done. That will set out in some granularity, by all the sort of categories that Richard and Colin have been talking about, how that will be achieved.

We are doing very similar things. We are also working on pyrolysis, as colleagues will be aware. The one thing that I would add is our status as a landowner. We are the second biggest landowner in Yorkshire. Obviously, that creates quite a lot of opportunity for offsetting. We have set up this network with other landowners in the county—Church Commissioners, Crown estates, the National Trust, et cetera—to see whether we can create a viable carbon trading market for Yorkshire, such that you could actually recycle carbon credits into landscape and biodiversity projects in Yorkshire. Wouldn't it be great if peatland restoration in Yorkshire was financed by the carbon offsets from Leeds Bradford airport, for example?

Q177 **James Wild:** I have to say that those are far more comprehensive answers than we were able to get in our earlier hearing, so I am grateful for them. Are you confident that the regulatory structure and framework is designed to support getting to this very important target?

Chair: Who is that to, Mr Wild?

James Wild: Mr Skellett looks like he is unmuted.

Colin Skellett: No; what we do need comes back to things like WINEP. The next WINEP programme needs to be carbon focused. We need to stop just looking at narrow elements of it and say, "What are the two most important things that we have to deliver? We have to deliver resilience, and we have to deliver carbon neutrality." We need to start from that, and work out from that, rather than starting from the narrower focus of specific compliance.

Chair: Mr Emmott, did you want to come in very briefly? We are about to wind up.

Richard Emmott: Just very briefly on the point that Colin was mentioning there, WINEP as it stands is an upward pressure on carbon that will increase our emissions by about 30 kilotons a year. We need to find a method within the regulatory system to take a sensible look at those things.

Chair: Thank you very much, Mr Wild, and thank you to all our witnesses. It has been a really interesting session. Although we have done our Report, there is a desire among members of the Committee to take some of the issues that we have been raising further, some of this through the offices of the Committee, to look at the value for money for taxpayers and

consumers. Obviously, there are other ways that parliamentarians can raise matters. I think we all have a very strong interest in this, on behalf of the consumers, as Nick Smith very clearly laid out in the difficult case that he is dealing with with Welsh Water.

Thank you all very much for your time. The transcript, as I said at the beginning, will be available in between 24 and 48 hours, thanks to the good offices of our colleagues at *Hansard.* It will be put up on our website uncorrected, so if you could get back to us very quickly with any comments. We have a number of things that you have said that you will write to us about. If you can liaise with the Clerks afterwards, that would be great. Thank you very much indeed.