HOUSE OF COMMONS

Public Accounts Committee

Oral evidence: Future of the advanced gas-cooled reactors, HC 1050

Monday 7 February 2022

Ordered by the House of Commons to be published on 7 February 2022.

Watch the meeting

Members present: Sir Geoffrey Clifton-Brown (Chair); Peter Grant; Anthony Higginbotham; Mr Richard Holden; Craig Mackinlay; Sarah Olney; Nick Smith; James Wild.

Gareth Davies, Comptroller and Auditor General, Adrian Jenner, Director of Parliamentary Relations, NAO, Peter Gray, Director, NAO, and Marius Gallaher, Alternate Treasury Officer of Accounts, were in attendance.

Questions 1 to 94

Witnesses

I: Sarah Munby, Permanent Secretary, Department for Business, Energy and Industrial Strategy; Umran Nazir, Deputy Director for Decommissioning, Department for Business, Energy and Industrial Strategy; David Peattie, Chief Executive, Nuclear Decommissioning Authority; Jerry Haller, Nuclear Decommissioning Director, EDF Energy.

Report by the Comptroller and Auditor General

The decommissioning of the AGR nuclear power stations (HC 1017)

Examination of witnesses

Witnesses: Sarah Munby, Umran Nazir, David Peattie and Jerry Haller.

Chair: Thank you very much. Good afternoon, everybody. Welcome to today's hearing of the Public Accounts Committee on the future of the advanced gas-cooled reactors on Monday 7 February 2022. I should explain that the Chair was not going to be in the country today. She is now in the country, but it had been arranged that I would chair this meeting. That is why I am here, not because there has been any coup.

As I say, a warm welcome to everybody to the Public Accounts Committee for Monday 7 February 2022. Today we will be looking at the future of advanced gas-cooled reactors. The UK's nuclear power is now primarily generated by seven advanced gas-cooled reactor stations, which are due to be cease decommissioned by 2028. While the Nuclear Liabilities Fund was established to meet the costs of decommissioning, the National Audit Office has found that significant additional taxpayer support has been needed with more likely to be necessary in the future.

Today we will be questioning the officials before us from BEIS, the Nuclear Decommissioning Authority and EDF Energy on the cost of decommissioning the AGRs, the progress they have made and the risks to value for money. A very warm welcome in no particular order at all to Umran Nazir, the deputy director for decommissioning radioactive material and geological disposal at BEIS; Sarah Munby, who is well known to all of us, the Permanent Secretary of BEIS; David Peattie, the chief executive of the Nuclear Decommissioning Authority—we last met you, David, during our very successful visit to Sellafield, which you organised very well—and finally but by no means least Jerry Haller, the nuclear decommissioning director at EDF Energy.

Just as a gentle one for a start, while Storm Malik might have been causing havoc to some in the north of the country and in Scotland, it was good news, Ms Munby, that it generated a record 19.5 gigawatts of power, which was a huge achievement and shows where we could go with green power generation and how important nuclear is to our future power generation suite. I do not know whether you want to comment on that or let it go.

Sarah Munby: Yes, absolutely. The only other thing I would say, if it is of interest to the Committee, is that we are still looking at what happened in Storm Arwen, which was a less successful episode in terms of restoring power. Both our internal review and Ofgem's review are due to publish fairly shortly. We will be looking forward to sharing the lessons learned from Storm Arwen. As you say, there was a much faster restoration last week. In BEIS, we all look for "windy but not too windy" as the ideal weather.

Q1 **Chair:** Yes, moderate to strong winds. We are all wrestling with energy prices, and the article by Jillian Ambrose in the *Guardian* on 30 January tells us that last September the price of electricity was £44 per megawatt, but by this September it was £424 per megawatt, which is a huge increase in power prices. Would you be able to tell the Committee what the package that the Government have announced to help cushion people's energy bills is?

Sarah Munby: Overall, it is a package of over £9 billion. You need to see the scale of that package in the context of a really quite significant increase in the energy price cap. There is such a significant increase in the energy price cap, because of the global increase in the wholesale price of gas.

Of the critical elements of that package, one that is not immediately anything to do with BEIS—although we are very interested in it, as it impacts energy users—is the council tax rebate for the majority of households in the UK. The bit that is very much on my mind as BEIS accounting officer is the scheme to reduce people's energy bills in time for next winter by £200. That £200 will then be repaid over five years at £40 a year. While that still means energy users are ultimately adjusting to a higher set of energy prices, which is something that needs to happen in the economy, it is softening and smoothing the blow.

While energy prices may never go back to where they were historically—predicting them in detail is a market from which you can make a great deal of money, certainly more than you do as a civil servant—our projections are that the peaks we are seeing now will come down over time. Therefore, people will see that they benefit from the £200 in the short term during this period of the very highest prices and they will see their bill reducing over time, despite the fact that they need to absorb that £40 cost over the next five years.

Q2 **Chair:** The energy price cap will increase in April by almost £700, which will almost double the average electricity bill, but it is likely to increase again in October, is it not? Will you keep this package of support under review?

Sarah Munby: That is right. It is likely to increase again in October. It will depend on what happens between now and then, of course, but, to frame it in your mind, we are not expecting another increase of the same sort of magnitude. More of a tick up would be the expectation for October. Of course, we will keep the package closely under review.

Q3 **Craig Mackinlay:** Ms Munby, looking at how important nuclear had become or was in our energy mix—I am all in favour of energy mixes—we have a chart on page 29 about the proposed close-down dates. We can see that all the power stations were meant to come to end of life some years before they have. We are finally talking about revving up our nuclear capacity once more, which will take a long time. Some of these power stations have already been extended, but end of life is on the horizon for

many of them: two in 2022, another two in 2024 and the remainder in 2028.

You will need to be fairly specialist in how these things work, which I am not, but is there any opportunity for them to be extended still further? My worry is that we are going to have a problem at the end of this decade when our nuclear supply has pretty much gone and our new nuclear will still be being built. My worry is that we could have two, three or four years of an energy gap while nuclear runs down and new nuclear comes up.

Chair: Would you like to direct that to Mr Peattie, as it is a technical question?

Q4 **Craig Mackinlay:** Yes. Mr Peattie, that is probably in your field, is it not?

David Peattie: Yes. These stations have already been producing longer than their original design lives. They are heavily regulated by the Office for Nuclear Regulation. Our colleagues from EDF, who are currently running those stations, have extended them as long as possible and they are working closely with the regulator to decide just how much longer they can go. There is an incentive on all sides to produce as much electricity as possible from these stations, but there comes a point when they have reached not just the end of their natural life but the end of their extended life. That is the data that you see in the Report.

Q5 **Craig Mackinlay:** You know the technicalities of these stations. In some cases, if there were significant investment, could they be extended? I am worried about the three or four years of hangover time for the baseload that we need. Would it be a cheaper route to spend more to extend them for another five or 10 years? Given the type of energy costs that we have seen at the moment, if we are trying to fill that gap with gas, it could be very expensive.

David Peattie: Yes, understood. I am sure EDF has left no stone unturned in trying to do that.

Jerry Haller: I am very happy to answer that. As a little bit of history, when EDF bought the business in 2009, EDF's big focus was, "What is the maximum possible life for these stations?" I led the life extension programme for EDF. We ended up doing what you have seen here, which is extending them out and EDF putting another £6 billion into the plants. The plants have run extremely well on the back of that increased investment. However, there is effectively a technical limit to how far those stations can run safely. We are running the stations safely to the technical limitations of the AGRs. We expect Sizewell, which is a PWR, to be able to run until 2055. We do expect that one to run beyond 2035 to 2055, but the AGRs do have a technical limitation on them.

I can say to the Committee that no further investment will take them further. We have put in absolutely as much money as they can usefully use in terms of the technical limitation. As I say, we are very focused not only on that technical limitation but on getting the most output out of them as

well. They have served us very well, but the original design life was 25 to 30 years. We have just closed Hunterston after 46 years. Anyone who has been to Hunterston will see that the plant is in a pristine condition. It is like new, and yet we have to close it.

Q6 **Craig Mackinlay:** I suppose the Dungeness B experience would be a good one. That was anticipated to be extended to 2028 and yet it is closed. What were the problems there? Were they a similar type of problem to what you are facing at the other ones?

Jerry Haller: No, it is not the same at Dungeness. Dungeness was a prototype AGR. It was the first of a kind. The rest of the AGRs, the other six, are all very similar. They are all limited by this technical thing called graphite. It is something inside the reactor that cannot continue to be used after a certain point in time.

The Dungeness situation was different. Again, we had invested in this prototype very heavily from 2014. We decided it could run. It is actually a very young station in terms of its primary ageing mechanisms: graphite and boilers. We extended it to 2028. We put a lot of money into it. Then in 2018 we took it offline to do some more investment in it for a load of things like conventional steam pipework et cetera. Unfortunately, at the back end of that, we found a problem with a technical component that is irreplaceable and was not on our list of things that should limit the life. It was a crushing blow for everyone at Dungeness and for us that we could not take it past that point and we had to close it. We do not expect that with the other ones, though. Graphite degradation is known for the others.

Chair: I am sure we will be coming back to that.

Q7 **Craig Mackinlay:** To finalise, Ms Munby, what are we going to do to fill that gap between, say, 2028 and 2032?

Sarah Munby: It is worth just emphasising the point about Sizewell B, which of course will be operating throughout. We have Hinkley Point C coming online in the mid-2020s as well. The gap is a softening rather than a deep hole. This is why we have tools like the capacity market, which allows us to buy electricity capacity well ahead of time. We are not concerned that there is going to be a lack of ability to generate electricity during that period.

The mix will evolve according to the right economics at the right time and there will probably be a period where the proportion of our energy that is coming from nuclear is not as high as it will be in the end state when we have multiple new gigawatt-scale nuclear reactors operating. It is not a matter of concern. The capacity market has shown itself to be a very robust method of ensuring that we have the electricity generation that we need.

Q8 **Chair:** In order to knock this whole issue on the head, because the public might be wondering whether this would be possible, figure 8 on page 29 gives some pretty firm dates for the closure of all seven AGRs. Can we take it that those are the dates at which they will close?

Jerry Haller: That is correct. As we might come on to, there are always risks of earlier closure, which we can talk about.

Chair: I was going to say that before Mr Mackinlay asked the next question.

Jerry Haller: Those are the dates that we expect the stations to close. The factors that I have talked about are now understood in terms of that life-limiting graphite.

Chair: That is really helpful.

Q9 **Sarah Olney:** Last year, there was a newly signed agreement between BEIS and EDF on how the outstanding liabilities for these reactors were going to be managed. What is your expectation about how that new agreement is going to reduce the outstanding liabilities, Ms Munby?

Sarah Munby: It is fairly round numbers for reasons that I hope are fairly obvious, but, relative to the previous case, we think the agreement will save about £1 billion of public money. There are a few reasons for that.

First, it allows us to better harness synergies inside David's organisation, the NDA, particularly with the existing Magnox decommissioning efforts. Secondly, it gives very clear incentives to EDF to carry out defueling in the lowest-cost and most efficient manner possible. We previously would have had a straight cost pass-through arrangement, so the introduction of incentives there is a really important component of what we are talking about.

Thirdly, we think it will allow faster defueling. I will come to why that is important in just one second. EDF now has certainty over the future path of all these different stations, and knows it can begin preparation and then ultimately defueling operations efficiently at the point of the end of life of the stations.

The duration of defueling is a really important cost driver, because while defueling is taking place you have to maintain the site in a quasi-operational form. That means having lots and lots of staff there. For example, around 75% of the people you have during operation are still there during defueling. There are similar sorts of security and safety issues, for example. Keeping the length of time it takes to do the defueling as tightly managed and as efficient as possible is the critical cost driver.

We think these arrangements will give certainty to both the NDA and EDF about what is going to happen and allow the handover between the two organisations to happen at the right moment. During defueling, the synergies that matter from a cost point of view are synergies with the

operation of the plant. EDF is currently defueling and refuelling these plants as part of the ongoing business of running them. EDF really knows how to do that.

When we shift into decommissioning, that is what David's organisation really knows how to do. We have transfer at the right moment and we have incentives. Overall, in round figures, we think it is a £1 billion saving to the public purse relative to where we were before. It is fair to say that all of us sitting here would say this has been a good deal.

Q10 **Sarah Olney:** Mr Haller, do you have any comment on that? You recognise that £1 billion and how it is going to be achieved.

Jerry Haller: Yes. As Sarah said, the key thing is doing defueling safely, of course, but as efficiently and quickly as we can. That is what minimises the cost. To do that, preparation is key. We have started it very early for these AGRs. We have confidence, as Sarah said, that the arrangements here will allow us, particularly the people on our stations, to focus on the task in hand, preparing and then doing an excellent job. It is an operational activity to remove that fuel. These arrangements do that. As we may talk about, the incentives around this are the right sort of incentives.

From our point of view, it gives us certainty in our role. As Sarah just said, this is what we do every day. We are going to do it in a more rapid fashion through defueling. It gives certainty to the arrangements. Knowing the way it is going to work is of a lot of value for everybody, to be honest. The people in David's organisation are experts in the post-defueling phase.

David Peattie: We think there is an obvious industrial logic in consolidating the decommissioning of the AGR fleet and the Magnox fleet, because there are some co-located sites. Perhaps we will get to that later in the meeting.

Q11

Sarah Olney: Ms Munby, does that mean we can expect to see a reduced liability estimate at the next revaluation? Can you commit to that?

Sarah Munby: I would never be so foolish, but it is true to say that over time we will see that saving feed into a lower requirement for the NLF or any other means of funding decommissioning liabilities. I could not commit to what the net position will be once everything is taken into account, but it is absolutely true that we would expect that to turn into real money saved over time.

Q12 **Sarah Olney:** On the flipside of that, are you satisfied that the estimated liabilities now are fit for purpose for the rest of the project?

Sarah Munby: We have a process of annual review with the NLF. Essentially, that fund is where the money will come from to support both the defueling activity carried out by EDF and the decommissioning activity carried out by the NDA. I am sure we will come to the reviews that have taken place over the last two years, which have resulted in additions to that fund. There are some very good reasons for that, which I would not expect to be repeated again in the same scale or form. It is true to say that these are very long-term activities. Circumstances will change, and we would expect the number to move up or down.

As a really good example to bring to life why that is reasonable, the biggest driver of the movement last year was the change in corporation tax. That added billions of pounds to the amount of money needed in the NLF. That is not something we can predict. The corporation tax rate may move further in the future in either direction. There are lots of factors like that. I would expect the fund to be in a stabilisation phase in terms of its size and for the changes to be shrinking, but we do not necessarily expect to reach a position where it will be exactly stable going forward. There will be changes in circumstances. Some will be very real, like the bringing forward of certain dates—that changes the number a lot—and some, like corporation tax, will be circumstantial but will change the nature of the number.

Q13 **Sarah Olney:** Can I quickly ask you about corporation tax? It is something like £5 billion or so on assets of £14.8 billion. Is that correct? That seems quite high.

Sarah Munby: Last year's increase was £5.6 billion. Somebody interrupt me if I have got the decimal point wrong. Around 80% of that is the corporation tax change.

Q14 **Sarah Olney:** It seems a lot of corporation tax, given that the fund is £14.8 billion.

Umran Nazir: It is an estimate of how much they will have to pay over the duration. On the fixed costs, yes, but that is how much it mounts up to over the duration of the expanding of their liabilities. That was their latest estimate.

Q15 **Sarah Olney:** How has it gone up so much in such a short period of time? Was it not properly estimated before?

Sarah Munby: It was a policy change. Just to be clear, from the point of view of the public purse this does not make any difference, but it does make a difference for the number that sits inside the NLF, if you see what I mean. This is money that is going out of the NLF and coming back into the Exchequer in a different form. There is not a value for money issue here, but it does mean that the number we are talking about moves. There will be other factors like that.

Chair: Can we just continue with this conversation about how this fund is funded and is funding the decommissioning of these AGR reactors?

Craig Mackinlay: Chair, can I just come in on liabilities very briefly?

Chair: Yes, of course.

Q16 **Craig Mackinlay:** Ms Munby, we are finally getting back on the nuclear track, as it were. There are some that have been proposed. For small modular, we are still in the phase of thinking, "Shall we? Shall we not? Where shall we?" There must be a limited number of people in this country who have skills across the nuclear industry. I can imagine that we are going to need a lot of those skills through EDF in the decommissioning phase and the fuel extraction. Will they not be similar skills that will be needed in the construction phase for new? Do we have enough physical people to do this work? Is it something we are looking at, if we can foresee a deficiency?

Sarah Munby: It is a really good question. I certainly would not casually suggest that we have enough people and that it is all fine. It is actually something we work very closely with the industry on. The Nuclear Skills Strategy Group is the relevant employer-led body. BEIS, MoD, the NDA and EDF sit on that.

Q17 **Craig Mackinlay:** There is always a group that you did not know existed and you did not know you needed.

Sarah Munby: I might invite David or, indeed, Jerry to comment on the detailed work of that group. I was interested to see that one of the more recent priorities of that group is specifically looking at the early-stage skills that are required during construction phases. They are related but not the same as the skills that we have had historically.

From a strategic perspective, it is one of the reasons why it is important to continue the pipeline of new build and to look forward beyond Hinkley Point to a further gigawatt-scale nuclear reactor. Doing that at the right time is important, because you capture the skills and the supply chain involved in Hinkley Point, and you move the people and the companies into the next build. That plays back into the overall strategic decisions we are taking in the Department.

David, you might want to comment in more detail on the skills picture.

David Peattie: You raise a great point. Keeping this pipeline of skills as well as the nuclear plants is really important. In the NDA we have over 650 graduates and apprentices. I am delighted that last year our graduate recruitment was almost 50% women, which is great news. These roles are spread around the country. This is very much part of the levelling-up agenda. There is a lot more to do. I am not complacent at all.

We do a huge amount with universities and, increasingly, schools, and through our ambassadors getting out there and encouraging young people who are interested in STEM subjects. There is now something of a nuclear

renaissance in the UK, and we should get behind it. It is the technologies, the excitement and the locations. I am fortunate enough to live in Cumbria, for instance. The other sites around the UK are very attractive to many people. There are some great jobs that we can offer them.

Q18 **Chair:** I want to get back to decommissioning costs, but I did have a question on skills. We have had—Mr Peattie, I do not know whether you have seen it—some good evidence from Nuleaf, the Nuclear Legacy Advisory Forum, which is 100 local authorities and national park authorities. They make the point that there should be agreements between your organisation, the Nuclear Decommissioning Authority, and each local authority in which the AGRs are located, to have a proper partnership agreement of some sort. Is that something you are pursuing?

David Peattie: It is something we are considering. Three of the sites of the AGRs are co-located with our existing sites at Dungeness, Hunterston and Hinkley A and B. We already have deep engagement with the local communities there. We have been there for decades. Having something to deepen that, particularly in the additional sites that will come in the second wave, is something that we should look at and consider even more deeply.

Q19 **Chair:** I know from my colleague that, where Hinkley C is sited, the transport issues have been massive. I imagine that the transport issues of each of these decommissionings will increase the problems with each local authority considerably. That is quite important.

Ms Munby, can I get back to the Nuclear Liabilities Fund and, indeed, the National Loans Fund, to ask you one or two questions about how this whole thing is funded and how the Nuclear Liabilities Fund works? Just now in answer to questions from Ms Olney, you have said you envisage that the thing has got into a broadly stable situation. You put £5.1 billion in in 2020. The Report indicates that you are likely to need to put in another £5.6 billion. These are big figures. It is hardly a stable situation, is it?

Sarah Munby: If I can clarify, I meant that after those two really substantial injections we would anticipate moving to a more stable phase. I absolutely agree. That is definitely not stability. Those have been really significant investments.

Q20 **Chair:** Before we get to the detailed questions on the fund, the Report makes it clear that the cost of decommissioning between 2004-05 and 2021 has doubled in real terms. Maybe Mr Peattie wants to come in on this, but, however we fund it, until we can be more certain—doubling is a very wide variation in what the actual cost of this is going to be—it is going to be difficult, is it not?

Sarah Munby: It is of course true to say that, when the costs are unstable, it is expensive and the money changes. It is worth maybe unpicking what has happened to the numbers specifically on AGRs. As you say, there has been a £5 billion injection and then a £5.6 billion injection into the NLF. As I say, those are both really big numbers.

Q21 **Chair:** That is absolutely certain now. You are definitely committed to the £5.6 billion.

Sarah Munby: It is subject to final parliamentary approval and so on. It is not a rock number, but that is what we are seeing internally. That is our expectation. You could not quite say it has been fully signed off yet.

A significant part of the £5 billion—order of magnitude, half—is not due to a cost increase at all. It is simply because over time most of this fund's assets have been invested in low-return assets. We can talk about the reasons for that. They have delivered less growth over time than we expected. One aspect of this is about topping the fund up to deal with lower than expected investment returns, which is nothing to do with the costs of defueling or decommissioning.

A significant component of that £5 billion was a £2.4 billion increase in defueling cost, which Jerry can certainly talk to in more detail. Essentially, the big driver of that is a change in time. As you can imagine, we have these liabilities coming on stream, some of them really quite far into the future. When they move backwards or forwards in time, because of the sorts of changes that we have been talking about today, it makes a really big difference to the present value of the future liabilities.

That is the first £5 billion. Half of that is a genuine increase in cost. Of the £5.6 billion, the latest increase, about 80% is caused by corporation tax rates. The remaining piece is to do with further moment around dates and a range of other inflationary pressures. None of that is to dispute that costs have gone up, but it is important that we get away from the headline sense that costs have gone up by over £10 billion. It is much less than that; it is less than a third of that.

Chair: That is really helpful. Mr Peattie, do you want to get into the business about what we really think the decommissioning costs are going to be?

David Peattie: Yes.

Chair: I did not mean to cut you off, Ms Munby. That was very helpful.

David Peattie: If we step right back—

Q22 **Nick Smith:** Sir Geoffrey, can I just come back a little bit on Sarah Munby's contribution? Just to take this back a little bit, Ms Munby, you made a comment about the lower performance of the fund. It seems to me that was happening over a fairly long period of time. When did you notice that or when did you decide that it did not matter that there was a lower performance?

Sarah Munby: It has been clear for really quite some time. You may always live in hope that something happens to those assets to make them perform better. If you will allow me to give you one minute of background, it is important for people to understand. That £14.5 billion that we have

been talking about is the current fund. Of that, £11.5 billion is intentionally held in very low-risk and correspondingly low-return assets. The remaining component, £3 billion, is held in a much more conventional higher-risk, higher-return investment portfolio. You could have moved that £11 billion into higher-risk assets.

There are two reasons why that has not happened and why instead HMT has preferred to, as it were, top it up with new money.

Q23 **Nick Smith:** That was the chosen strategy: to top it up at a later point; to go for low performance but with a surer return.

Sarah Munby: Yes, exactly. The first reason is that the £11.5 billion is held against public sector net debt, because of the nature of the assets it is held in. That would change if you moved it into a different kind of portfolio. The second is that the risk here is held by the taxpayer. Ultimately, the taxpayer is responsible for the costs, however they may fall. We have labelled some money into this particular fund, but it is not obviously the right answer for the fund to go after a really high-risk strategy. If these higher-risk assets did not give the return we wanted, that would ultimately fall to the taxpayer.

When you are talking about a burden that is all on the public purse anyway, it is not obvious that a high-risk investment strategy is the right one. As you can imagine, that has been very well trodden over between the Department and HMT to find the right approach.

Q24 **Chair:** I am going to come back to you, Mr Peattie, on the costs of decommissioning, but, since we are in the detail of this, let us stick with the detail, because it is really important. At the beginning, some of the assets in the fund were funded by the sale of various nuclear shareholdings, but more latterly it has been topped up by the taxpayer with some quite chunky amounts.

What we are talking about is the Government, out of taxpayers' money, finding the money, putting it into the fund and investing 80% of it at a very low return for some repayment of decommissioning in a large number of years' time. You have inflation. Particularly with inflation high at the moment, this does seem a fairly daft strategy to me.

Umran Nazir: We are seeing higher returns from the National Loans Fund recently, because interest rates have gone up, but you are right: inflation is also going up. The fund trustees would say that the fund is currently sufficient.

These last two decisions have come across to the Government: "What would you prefer to do? Would you prefer us to move more money out of the National Loans Fund into this higher-returning asset or would you like to top up the fund?" That is a choice for Treasury. Alternatively, they could decide to allow more money to flow out of the National Loans Fund. That would have an impact on public sector net debt, but it would potentially also be a riskier manoeuvre. That option existed at both times and, if we

have to make a further top-up in the future, an alternative scenario might be chosen and you might move money out of the National Loans Fund. For now, this was chosen to be the best route.

Previously, the Nuclear Liabilities Fund has been more than sufficient. This liability versus asset picture does change over time. It has been the case these last two times that it seemed to make sense to top up the National Loans Fund in order to make it sufficient. That might not necessarily always be the case.

Q25 **Chair:** Somebody did some numbers for me. If you apply the 6.2% return that you are getting from the private sector, which is not all that risky a return, over three years you are getting £17.7 billion. If you apply the 0.1% to that same money, you are only getting £15 billion. A simple change in investment strategy would have netted you an additional £2 billion over those three years. You have money being paid by taxpayers many years up front being inflated away on a very low return. What sort of sense does that make?

Umran Nazir: The important thing to remember is that when the money comes out of the fund, when it flows through to EDF, it first of all comes out of the National Loans Fund. This actively managed fund will keep growing over time. It has a very long time against which to grow. At some point, this fund is going to be one of the biggest funds out there. If you had the trustees in front of you, I am sure they would say they are quite happy with their investment policy. That is their job. They have a fiduciary responsibility to ensure they keep us advised on what they think the most appropriate investment strategy is. If they really did disagree with us topping up the National Loans Fund—"This is not going to work. This is bad for the taxpayer"—they had an opportunity to say that. They have not.

They are quite happy with the scenario that they have at the moment, because they know that an actively managed fund will grow quite considerably. That £3.5 billion will grow over the lifetime we are talking about here, which is a very considerable lifetime. It will be 80-plus years

before we start fully decommissioning some of these stations. That is a long time for that fund to grow.

Q26 **Chair:** You could look at it from the opposite end of the telescope. If you got a little bit of a higher return on it, the taxpayer would have to put a little bit less money in over those 80 years.

Sarah Munby: Ultimately, the question is, "For a given chunk of money that belongs to the taxpayer, what is the right investment strategy? Should it be high risk, medium risk or low risk?" There are a number of ways of looking at it. One is to look at this problem in isolation and say, "This is all about fixing the AGR problem. We should go for a moderaterisk approach—a higher-risk approach than the one we have now".

The other way of looking at the problem is that all the risk is then just carried by the public purse anyway. In general you would not invest public assets into a particularly high-risk portfolio. That is not what we typically do with taxpayers' money. There is a balance to be drawn here. Indeed, that is reflected in the mix between the £11.5 billion and the £3 billion, which we would expect to grow over time.

Q27 **Chair:** But 80% of the fund is in a fund that is returning 0.1%. Is that sensible?

Sarah Munby: I appreciate that this is a very unattractive answer, but these are really questions for the Treasury. This is about the kind of details around the right investment strategy for one of the public sector's substantial assets. There are some other assets that are handled in this way, such as some of the funded pension schemes. Flood Re is similar as well.

Our job is to make sure that, whatever the right strategy, we are on the correct curve between risk and return. We have had a pretty clear instruction about the approach that we should take around risk with this fund.

Q28 **Chair:** I am going to suggest an approach that might get to the bottom of this, if I may. We could argue about public sector net debt and all sorts of things, but we are not going to solve that this afternoon, with great respect to all of us. May I suggest that the PAC, in conjunction with the Comptroller and Auditor General, works up a fairly detailed letter that should go to you and the Permanent Secretary at the Treasury to try to get some answers to get to the bottom of this? There are very big sums of money involved here. I would just like to fully understand why we are doing it in the way we are doing it, if that is acceptable.

Sarah Munby: I would very happily work with my colleagues at Treasury to come back to you with a full answer on all of this.

Chair: That is very helpful. Thank you very much indeed.

Q29 **Sarah Olney:** Just to finish off that section, what lessons have you learned from the funding of the current programme through the Nuclear Liabilities Fund that you will apply to the future nuclear programme?

Sarah Munby: It is worth saying that there is already a very clear set-up enshrined in legislation around new nuclear, which is that any new nuclear construction has to have a funded decommissioning plan in place before construction begins. That means we cannot find ourselves in a situation where the money has not been correctly built up over the life of operation.

At the point at which operation ends, there should then be a sufficient fund in place to carry out decommissioning after that. There are some quite detailed provisions within that for adjusting, as it were, the contributions from the asset during its life. If the sorts of changes that I have talked about started to emerge, for example, you would take more cost out of the asset during its period of operation to ensure that the decommissioning liabilities are fully funded at the point at which the station enters decommissioning. It is quite a different set-up, because we are building from the start with decommissioning in mind.

It is also worth taking the opportunity to make an important distinction between the new-build construction versus, particularly, the Magnox stations that we have talked about before and the AGR stations. As a proportion of the whole-life cost of the asset, decommissioning really comes down with the latest reactor technologies. We can talk about the physical reasons for that, but it is just worth having in mind that, although decommissioning costs for Hinkley will be serious, of the Hinkley strike price 2% is made up of decommissioning cost.

That is much less than if you looked at the equivalent question for either the AGRs or Magnox. Because these reactors are designed now, when we know so much more about the challenges that we will face in the future around decommissioning—not to put a slogan on it—they are designed to be decommissioned in a way that earlier stations were not.

There is a different process for funding, but there is also much more certainty and much lower cost coming down the line as we begin to decommission the newer stations.

Q30 **Chair:** Nevertheless, it is important to get this correct, is it not? Otherwise, today's taxpayers are not paying the full dues on the electricity they are using, and tomorrow's taxpayers, the next generation, are going to have to pay the additional amounts. It is very important to estimate these costs correctly, is it not?

Sarah Munby: Yes, absolutely.

Q31 **Sarah Olney:** Figure 10 on page 41 of the Report sets out a range of scenarios, from reasonable best case to reasonable worst case, for defueling. It sets the cost between £3.1 billion for the reasonable best case and £8 billion for the reasonable worst case. What is your assessment of which of these scenarios is currently most likely?

Sarah Munby: This was built relatively recently, and therefore it was deliberately built to be a balanced assessment. At the point at which we agreed how this would be handled and particularly the incentive mechanisms with EDF, we went through the process of, "What is the central point?" I am struggling for exactly the central point, but Umran might help me while I am talking. We have a central point estimate, and then essentially both the reasonable worst case and the reasonable best case are balanced in probability terms. We are not skewed towards either one at this moment.

Clearly, it is conceivable that we may over time drift upwards or drift downwards, but these numbers are designed such that we are headed towards the central point.

David Peattie: To give the Committee some comfort, colleagues at EDF and the NDA are absolutely dedicated to getting to the bottom of this range, which is on this table at £3.128 billion. There is a significant saving for the taxpayer, the closer we can get to the lower figure. We have been at this for some years now with the AGR operating programme, which is a joint endeavour between EDF, the NDA and the Department, that is trying to optimise the system.

Chair, would it be helpful if I were to describe a little bit what the defueling operation involves?

Q32 **Chair:** Yes, and what can go wrong.

David Peattie: Just to paint a picture for you, there are 14 reactors, seven stations and six sites. When the fuel is removed from the reactor, after some activity with it, it is placed into a cooling pond at the reactor site. It will sit there for about three months, 90 days. At that point, in discussion with EDF, the NDA will start to plan the transport of the fuel. All the fuel in all of these AGRs will end up at Sellafield.

Under the NDA's overall picture of assets, we have a dedicated rail company, Direct Rail Services, which you may be aware of. We have 100 locomotives; we have drivers. We also have contracts with Tesco, because our movements are not all nuclear. It is a very small but a slightly profitable endeavour for the taxpayer.

Direct Rail Services is the dedicated company that moves the fuel from the AGR stations to Sellafield. This takes place on rail. We have two locos on each train for safety reasons. We have been doing this for over 30 years and we have not had one incident, which is something to be very proud of. The fuel is transported in something called a flask. A flask is a big, engineered lump of metal. It is about half the size of an ISO container.

Q33 **Chair:** You can keep this quite brief, because it is well described in the Report.

David Peattie: I will, yes. The flasks are moved to Sellafield. We do a handful a week currently. The fuel is received in Sellafield and goes into storage ponds again for another six months, and then it goes into the most challenging part of the operation, which is in the dismantler. Through metre-thick walls and very toughened glass, the teams—expert teams who have been doing this for decades—will dismantle the fuel. The graphite sleeves and the steel collars are removed, and then the fuel material is ultimately taken and stored indoors.

Sir Geoffrey, you may remember the THORP ponds at Sellafield, which are the size of three Olympic swimming pools. It is a very engineered system. That is where the fuel will ultimately rest for many decades until it goes into the ultimate repository.

Where can it go wrong? If you look at where the bottlenecks in the system are, we have capacity at the stations to hold the spent fuel, if need be. We have sufficient flask and rail capacity to get the material to Sellafield. The real challenge is at Sellafield itself, where we only have this one system for getting the material through. Of course we have upstream contingency to store the fuel either above the dismantler or after it. That whole system has 12 steps.

The AGR operating plan is looking at each of these 12 steps and at how we can optimise that system to operate at the level that will allow us to optimise the defueling of all 14 reactors. To give you a scale of this really

quickly, let me give you one fun fact. Each reactor has 300 fuel channels, and in each fuel channel there are around 300 fuel pins. That is 90,000 fuel pins per reactor, and we have 14 reactors. Each reactor will take about 200 flask movements to do the full defueling. We have done it before. This is not a new process. We have been doing it for decades, but we are now trying to take this to that next level of optimisation.

Q34 **Sarah Olney:** Can I quickly ask you about that, Mr Peattie, though? Figure 13 on page 48 is showing that you are forecast to exceed the maximum amount of space available at Sellafield next year. Can you just quickly talk me through how that is going to work?

David Peattie: I can. The limit there is around 300 tonnes a year. I am sorry that it is another metric. We are looking at how we can increase that by around 10% to get to 330 or 340 tonnes a year. From eyeballing the chart, you can see that, if we can get to that by these various efficiency and optimisation steps through the chain, we will be able to cover the current expected defueling rates from multiple reactors at the same time.

Where could it go wrong, Chair, as you asked earlier? If some of the reactors came off even earlier than we discussed earlier in this meeting, that would potentially add even further pressure on our downstream. There are ways that we can avoid that through various holding stations that we have through the process. We want to go as quickly and as safely as we can to defuel these reactors as efficiently as possible. EDF is incentivised to do that financially. The NDA wants to get on and do this, because, once we have defueled, we can get on with our other important work.

Q35 **Nick Smith:** Imagine that you had another Dungeness B and you had to set up or use what you called holding stations, because there was a capacity issue at Sellafield. Tell us a bit more about what that would mean. What are these holding stations?

David Peattie: They are simple ponds. They are outdoor concrete-lined swimming pools. You would not swim in them, obviously. They are big quantities of water—the size of three or four Olympic swimming pools. The water is a very good barrier and radioactive protector, and it also cools the containers where the fuel is. They can sit there happily, as they have at Sellafield, for many years. That is how you can hold at the very high upstream end of the system.

Q36 **Nick Smith:** Would that mean building new swimming pools, as you described them, on site where the fuel presently is? Would you have extra capacity at Sellafield? Do you have that in hand?

David Peattie: We have that in hand. We do not currently believe that we need to build any more swimming pools. We have sufficient around the whole system. That is another really important point. By bringing the AGRs and the Magnox fleet under one roof, we can really optimise this. As you will have seen in the Report, we have already avoided a £100 million storage facility by working with colleagues at EDF in Hunterston and Hinkley. The same would apply to the ponds and storage. We have significant storage space not just at Sellafield but at all of our sites.

Q37 **Nick Smith:** Are there any related costs? Are there any further costs related to the extra swimming pools or ponds that you talked about? Is it all part of the present infrastructure?

David Peattie: The capital cost is already sunk, so there is no extra cost there. There is more maintenance and perhaps a few more people needed. Ultimately, the rate-determining step for the most efficient defueling will be the storage of the material, unless the dismantler that I talked about becomes very problematic. Then we will have to look at what other options we have.

Ultimately, the spent fuel can stay exactly where it is. It is perfectly well contained in the reactor cores, but of course we do not want to do that. We want to get it out, defueled and stored for the longer term.

Q38 **Sarah Olney:** Just going back to the £5.6 billion for the fund, which we talked about earlier: did that request take into account the extra costs that have arisen as a result of the early closure of Dungeness? Did that occur afterwards and now has to be incorporated?

Sarah Munby: That predates the final news about Dungeness. We expect some further increase next year to account for the latest news on Dungeness.

Q39 **Sarah Olney:** You still expect the £5.6 billion to be a sufficient boost to the liabilities.

Umran Nazir: Yes, we have put in place a process now where every year the NLF trustees will write to us to indicate how those liabilities have moved and give us options on how we might want to respond to that.

In response to your earlier question about where we think we are against this range of fleet-wide cost, out incentive is split in two. It is a station-by-station incentive but also a fleet-wide incentive. That incentive was set at the point we made the deal. It is set against a range of £2.2 billion to £5 billion in current money. That gives you a sense of where we were aiming to land this fleet-wide target.

Clearly, that £2.2 billion has slightly disappeared, as has been shown here. That was a consequence of the earlier closure that we have seen, which we had not foreseen when we were doing the deal. That is the range we hope to land in. Jerry might be able to say a bit more about how EDF feels about that range of cost.

Jerry Haller: Yes, first of all, the way that we set these ranges up was deliberately to expose the best possible that can be done and also, if everything stacks up against us, the worst possible. Our actions and our plans are geared to enable the best to happen and to protect and mitigate against the worst happening. The new method of estimating is really driving the right behaviours in our organisation, and it is helping us put our efforts in the right places.

We are very happy with the top-down nature. We think these ranges are the reality of defueling, which we can then influence. We are happy with the incentive arrangements. As is mentioned in the Report, the broader performance framework is a useful mechanism to hold us to account and, very importantly, to create a positive dynamic on the stations. It is the people on the stations and the people in David's organisation who we need to perform very well. We want the operators to understand what they are doing, why they are doing it, why it is important and what it means to us both financially and in a wider context as well.

If you take our Hunterston station, for example, in the last six years since the 2015 strategic review, which the Government very wisely held, we have been preparing the station. I would invite any member of the Committee to visit Hunterston. It is incredibly well prepared for the mission ahead. That is because we have taken it very seriously and we have got ready. We have done this sort of scenario work on what is going to drive the cost, which is largely time, what can make things go faster safely, what can mitigate the risks, in some cases spares et cetera, and having an engaged workforce that wants to do this and knows why it is important. That is where we are.

To the question about what we are intending to do, we are driving for the best end of this and mitigating, as best we can, with investment the bad end of it.

Q40 **Chair:** I had not realised that this incentive to EDFE was on a station-by-station basis. Is the £100 million that is talked about in the Report for each station? When I was reading the Report, that did seem to me quite a low figure, considering the overall potential cost to the taxpayer.

Umran Nazir: The £100 million up and down is £30 million both ways for fleet-wide and then the remainder is both ways for station by station. Those station-by-station targets are not set until the station actually closes. The Dungeness and Hunterston targets will be set shortly. They have not been set beforehand. Against each of those stations, we have up and down,

which might be reasonably low. It is eight up, 10 down per station, roughly. I take your point: is that enough? Is it a big figure? It is coming at a point where there is no generation activity on these stations. Alternatively, there would have just been costs passed through.

It may be a low incentive in comparison to these large, billion-pound figures we are talking about, but, at a station level, recognising the kind of activity that will be taking place at those stations, it was considered reasonable. It is £100 million up and down, so a £200 million range, playing against the lower end of that fleet-wide target originally, which was £2.2 billion. That 10% against the total cost seems reasonable.

Sarah Munby: After the statement of principles in 2019, we had a critical friend review by Peter Warry of our entire negotiating approach, to try to ensure that we got the right outcome for the taxpayer here. One of the critical points made during that critical friend review was the importance of station-level targets for incentivising the behaviour that we need. That pushing of a substantial proportion of the incentive programme on to station-level targets in order to drive on-the-ground change was a very conscious decision by the Department.

Q41 **Chair:** I have one or two technical questions for either you, Mr Peattie, or Mr Haller—whoever. I am drilling down on these decommissioning costs, because it can happen two ways. You can either go in too early or too late and either has an effect on the decommissioning costs. This may not be a question for you; it may be a question for Ms Munby. What do we know about the condition of these AGRs? Are we likely to get any sort of repeat of Dungeness in any of the other ones?

David Peattie: The AGRs, as Mr Haller said earlier, are in very good shape, because many of them have been producing right up until the last few months. In those terms, they are not as decayed as some of the Magnox sites are.

Q42 **Chair:** That is what I am getting at.

David Peattie: That said, they were designed in the 1960s, when the Magnox fleet was also designed. Because of that, they did not have decommissioning built into their plans for end of life. That applies as much to the Magnox fleet as it does to the AGR fleet. There are vaults under the AGR fleet that we will not be able to access for 80 years.

As we have explained before in this Committee, the uncertainty and the context within which those first-generation nuclear reactors were built here in the UK was very different. In the early days, they were built partly for the defence programme and partly to generate electricity. All that uncertainty now is what my organisation and I are dealing with, as we try to clean them up. I know that it is very frustrating. We learn more as we get closer to it, mature and see what the problems are. The records are very poor.

Q43 **Chair:** Thinking back to those rather tumultuous hearings on Magnox, one of the big cost drivers was asbestos. Do we know anything about asbestos in these AGR reactors?

Jerry Haller: I am happy to answer that. We know more than probably the Magnox fleet did, so we certainly hold things like asbestos registers for every station, for example. At our lead station, there have been sitewide surveys now to look specifically for the risk there. I am sure there will be findings that we do not know about and there are uncertainties, as David points out.

One big advantage we have now is that, through the co-operation agreement we have, we are very happy to go and do further surveys and investigations. The uncertainty is there, but we have opportunity to go chase down some of that uncertainty.

Q44 **Chair:** Going back to my theme of questions, going in too early causes increased decommissioning costs and going in too late causes increased decommissioning costs. You have assured us that you do not think that there is going to be a repeat of Dungeness, because you think that they are all likely to be able to last until their expected closure dates. That is good news. Going in too late also causes a problem.

At the moment, are there any known reasons why the decommissioning of all the rest of the stations should not go on time? If it goes over time, the costs of storage and maintenance after the transfer, which have to be borne by the fund, are likely to increase considerably.

Jerry Haller: One thing that, again, came out of the 2015 review was that traditional best practice before was to start three years before the closure of a station. We doubled that to six years. To answer your question quickly, all our stations are in defueling preparation now. We prepared very well for our lead stations. All the rest are already preparing for defueling. We have, effectively, a joint mission for our generation business, which is to keep the safe output going, but also to be preparing actively for this defueling mission. For the evidence that we can do that, you only have to look at our lead stations at Hunterston and Hinkley, and see the state of readiness there, which we are very proud of.

Q45 **Chair:** That is very helpful. Another big issue has to do with costs. If I can take you to case study 2 on page 53, care and maintenance as opposed to rolling decommissioning, you are doing some rolling decommissioning on the Magnox stations, in other words going in and
actively decommissioning them after they are defueled, rather than waiting for their half-life to cause the radioactivity to decrease over many decades. You are going in and proactively doing it much sooner. That is probably more expensive but saves on decades of care and maintenance. Where have we got to with that debate, Mr Peattie?

David Peattie: You are absolutely right, Chair. The strategy for the 26 Magnox stations has shifted from care and maintenance across the board

to one of continuous reactor decommissioning, so a bespoke plan for each reactor.

If you visit Dungeness, for instance, the notion of care and maintenance for 70 or 80 years does not make sense. At Dungeness, on the Kent coast, it is virtually offshore. It is the largest shingle beach in Europe. When you visit, you can taste the salt in the air and see the impact on the steel. It is degrading to a point where we need to get on and decommission it.

We also wish to proceed at one of our Welsh stations, Trawsfynydd, in Snowdonia, and move that quickly as a lead and learn. For some of the others, though, it may still make sense just to wait a few decades. Of course, we have to balance spend today with long-term taxpayer value.

As the AGR fleets come across after defueling, we then have a bigger portfolio. We will be able to optimise at the portfolio level, rather than site by site. There may be reasons why we wish to retain a care and maintenance strategy for individual AGR stations because of the nature of the burn of the fuel.

To get technical for a very brief second, the AGR fuel has been irradiated to a greater degree. The AGR stations run at a higher temperature than Magnox. It might make sense for some of those to be held for longer.

We have found, in some of our Magnox stations, that the radioactive decay has actually occurred more quickly than we had previously modelled, so we are able to get on it. The short answer is that it is a dynamic system and a dynamic problem, but, once we have a bigger pool of reactors to look at, we ought to be able to see some real improvements and better taxpayer value over the 80 to 100 years that this will take.

Q46 **Chair:** I am going to come to Ms Munby or Mr Umran Nazir in a minute, because that is going to have an effect on the liability on the fund. When are we going to get to a decision as to which power station you are going to treat in which way?

David Peattie: It is very much horses for courses. The first of the AGR stations coming across will be Hunterston B, which is co-located right next to, with just a thin chain link fence in between, Hunterston A. Within weeks of the transfer, it will just be one big site. There will be some synergies that we can see coming from the co-located sites.

Interestingly, the first three sites to come over all happen to be the ones co-located with Magnox, at Dungeness, Hinkley and Hunterston. The second wave are the ones that are the independent sites. I think we will see the synergies from the co-location and then synergies from the portfolio effect as we get the whole package together.

Q47 **Chair:** By the time they are transferred to you, will you have the answer as to which method you are going to use, or will it take some time after that? Given that you will not have had access to the site, will it take some time after that for you to decide how you are going to treat them?

David Peattie: It will take some time after that. However, again taking Hunterston as an example, over the defueling period, which can be three to four years, we will be working with colleagues from EDF to think about what peripheral activities we can do. There are many buildings on both sites that we just want to get on and knock down. We can synergise that, helping the local supply chains, so they have more work to do and more quickly.

Q48 **Chair:** Ms Munby or Mr Umran Nazir, this is going to have quite a significant effect on the funds. One way, doing it more proactively, at least initially, is going to require more money up front. How are you planning the fund to deal with that?

Sarah Munby: Ultimately, that is why we have this annual process that Umran has talked about, where we review the status of the fund against the latest view on the plan and what that plan will cost at different times. Then you are putting together the size of the fund today, the size of the commitments that you are making, the timings of the commitments that you are making in the future and the likely investment return of the fund to work out whether you need to add to it, or, I should say, whether, at some point, the fund becomes too big, at which point we have the ability to have the money returned. It is not a one-way process.

Q49 **Chair:** To be clear on the fund, on the answer you gave earlier, there is an ability to switch, with the Department's sanction, from the basic rate investment to a higher rate investment, if you wish to do so.

Sarah Munby: Yes. It would require both the Department's and HMT's sanction.

Q50 **Peter Grant:** Good afternoon to the witnesses. In the NAO Report, and it is also mentioned in the Nuclear Liabilities Fund accounts for 2021, it says that the main reason for the request for an injection of £5.6 billion was a result of an increase in corporation taxes arranged by the Government. Can somebody explain why a corporation tax increase from 19% to 25% is going to cost the fund £5.6 billion?

Umran Nazir: We had this question. It is for the total lifetime of the liability, rather than just in-year. Over that lifetime liability, that was the estimated additional cost to the liabilities that the trustees advise us on.

Q51 **Peter Grant:** What have they assessed as the lifetime and what is the annual discount rate on that figure?

Umran Nazir: I cannot tell you that, I am afraid. I will have to get back to you on that.

Sarah Munby: It is worth saying that, effectively, we are assuming that the corporation tax change is permanent, if you see what I mean. Just before you joined, we were discussing the fact that these things can move over time and the number will move as these things move. It is not an assessment of the impact of a two-year change. It is the long term and the numbers get very large because you are adding up year after year after year after year, going right out into the future. That is why you end up with a number that is counterintuitively large, simply because you are adding up the full stream of payments permanently.

Umran Nazir: Partly in answer to your earlier questions, Sir Geoffrey, I will add to what Sarah was saying, because I do not want to get it in the neck from the trustees after this. Yes, of course the BEIS Secretary of State and Treasury can make a decision about investment. That is always following on from the trustees advising us, "Here is the change in liabilities and here are your options". That is the process we set up now. They will initiate that, do an assessment of how the liabilities have changed, how their asset returns have changed, and then we have an option.

Chair: Thank you. That is very helpful.

Q52 **Peter Grant:** I come back to both witnesses. I understand what you are saying, but I do not know if it is something where you can send the full detail to the Committee in confidence. My difficulty is that the entire corporation tax bill last year was £49 million. The three years previous to that, it was only about £55 million in total. Even if you take that £49 million as what the 19% tax bill would be every year, an increase from 19% to 25% adds about £16 million a year on to the bill. It takes an awful long time, at £16 million a year, to run up a total cost of £5.6 billion.

Sarah Munby: We are really happy to come back to you in writing on this. The maths works, as it were, but I understand that we need to actually lay that out for you.

Chair: That is really helpful. Thank you.

Q53 **Nick Smith:** Mr Haller, I am pleased to hear about the asbestos checks. It is a great comfort. In the Hartlepool by-election last year, I went to that site, which I felt to be very 1970s, but at the same time up to date. They managed to carry that off, spick and span, and very secure. My takeaway was that it was a big site and there would be an awful lot of work to do. I was pleased too to hear from Mr Peattie about what he called dynamic problems going forward.

We are interested in this issue about the site transfer arrangements that still need to be resolved. I wonder if you could tell us more about that. What else is in hand? What are the risks? What do we need to be mindful of, please?

Umran Nazir: There are a number of things that we realised, when we were striking a deal, that we would have to get clarity on, but we could not get clarity on yet. Who were the people we would want to transfer over alongside the station transferring over to the NDA? What was the status of the site? What land parcels did we need to agree?

When we were trying to essentially agree the main framework of the deal and the key incentive arrangements, all those kinds of details we just could not be sure on, until we were at a further stage of maturity with respect to the station. That is why we created this co-operation MoU, memorandum of understanding, against which those things will be sorted out in the intervening period, while the stations are defueling. David can talk a bit more about how NDA is working with EDF on those precise details now.

David Peattie: For me, it distils into two things: the land and the people at the point of transfer. The regulator, which controls the transition, the delicensing and relicensing to Magnox Ltd, which will be the site licence company, will require EDF to transfer to us everything that we need to decommission. We have the support of the regulator.

Even ahead of that, the co-operation that we have between EDF and the NDA is truly excellent. We have a common interest in getting the right land moved across so that then they can be delicensed. Only then can EDF hand it over to us. It is also for the people, so that the people understand.

Q54 **Nick Smith:** We get that, but why have you not done that already?

David Peattie: It is still some years for each station to come to us, three and a half to four years probably before the first one moves across. We are in talks. We have nine work groups that are laid out in the Report, which we are actively pursuing together. There is still a lot of uncertainty. I think we all felt that, if we tried to drive it into a legal agreement at the same time as the option agreement, there would have been so many caveats to it that it would not really have been any better than an MoU, which is what we have.

Q55 **Nick Smith:** It still feels very broad to us. Can you tell us a little bit more about the uncertainties so we can understand them a bit more, please?

David Peattie: One of two big areas of uncertainly is, specifically, pieces of land, so, site by site, precisely which part of the land currently owned by EDF will transferred to the NDA, right down to the last few acres, including car parks.

Q56 **Chair:** I have a specific question on that. As a surveyor, I can see all

sorts of arguments here. Would land that is not needed for decommissioning but could well have a very significant commercial value belong to EDFE or you?

David Peattie: It currently belongs to EDFE and would continue to be, unless, with the regulator's support, it was agreed that that land must be transferred to the NDA for the purposes of decommissioning.

Chair: That is very helpful.

Q57 **Nick Smith:** I still do not understand why you are not locking horns and getting to the bottom of this stuff now. It will take you two and a half to three years in two and a half to three years' time, will it not?

Sarah Munby: You are, right?

Jerry Haller: We are doing it right now. Only when the deal was signed was the transfer option taken. We had started conversations before then, but now we have really ramped up both teams across all aspects of that transfer.

To the land point, the legal agreement, the option agreement, makes sure that we must transfer, for the licence you have just described there, the land needed for decommissioning. It makes sure that, if we were to try and use a different parcel of land for a car park, for example, we must compensate for that. We have to work through those details, but there is a good option agreement that makes sure that everything for relicensing happens. We are obliged to do that.

To a higher level, co-operating at a pace that we are now often running on, it is going to get a good outcome. It is really not in any of our interests for there to be any surprises here. At the top of our business ambition is "seamless transfer". We want it to be smooth.

Q58 **Nick Smith:** Mr Haller, you sound very confident and it all seems in hand. Do you have any niggles at all—things that are concerning you that you cannot anticipate being able to bottom out?

Jerry Haller: No, we just need the teams to work together and work through the detail, but there is lots of detail to be worked through. That is true.

Chair: I am going to interrupt. I want to come back to this transfer, because it is very important, but I wanted to bring in Mr Grant, because he is trying to juggle his time.

Q59 **Peter Grant:** Ms Munby, are there any circumstances in which the station operators can be expected to increase their contribution to the Nuclear Liabilities Fund?

Sarah Munby: For the AGRs, to be specific, no, I do not think so.

Umran Nazir: Those contributions were set at a point where the deal was structured, back in 2009. Jerry might know more about that structure than me. The way that value proposition works, we could have asked them to

potentially increase those contributions over time and left that more uncertain, but that would have had an impact on the sale value and how much we would have got at that point. It was done that way, with that value attached, so that was the deal that was struck.

I should add that, if the life of the Sizewell B station is extended, that will incur some additional money being paid to the NLF.

Q60 **Peter Grant:** Would it be fair to say that, in 2009, the Government of the day were not in a particularly strong position when they were trying to get someone to take over what was basically a failing energy company? Is that why we ended up with a deal that was not very good?

Umran Nazir: EDF paid £12.5 billion at that point for the company. If a different deal had been done that created more risk for EDF, I am assuming that that would have affected that price. It is difficult to make a judgment about what would have happened if you actually changed the construct of that deal. I should not comment on things that I do not know that much about. It seems logical to me that, if you had changed the risk qualification, that would have changed the economics of the deal at that point and you would probably have got less for it.

Q61 **Peter Grant:** Given the amount of uncertainty there is around, for example, the adequacy of the fund into the longer-term future, that risk is entirely borne by the taxpayer, is it not? If the fund does not make the returns it needs to, it is going to come back to the taxpayer for another £5 billion and another £5 billion and another £5 billion.
Why is it that the taxpayer takes all the risk? Why do we not have more risk sharing, given there is so much uncertainty? Why were we not able to get a deal that had the private sector, which is, after all, expecting to make a lot of money out of it, asked to take some of the long-term risk?

Sarah Munby: It was. I appreciate this is small, relatively speaking, but the £100 million up or £100 million down incentive for EDF is absolutely a meaningful financial risk for EDF on the defueling component.

On the decommissioning component, ultimately this is an NDA responsibility. The challenge of nuclear decommissioning is that it is ultimately a responsibility that falls to the public purse. It is for me and David to ensure that that responsibility is discharged in the most appropriate, lowest-cost and safest manner. There is not a private sector risk transfer option available here.

Clearly, deals could have been structured differently decades and decades and decades ago. As we talked about earlier in the hearing, as we look forward to new nuclear power stations, we will be structuring that differently, so that the risk falls much more strongly on the operator. Our responsibility now is to manage the risk in front of us as best we can.

Q62 **Peter Grant:** What is your reasonable worst-case scenario estimate as to the total additional funding that would be required from the public purse?

Sarah Munby: For the defueling component, there is a number in the Report. Around £8 billion is the agreed reasonable worst-case scenario for the defueling component. For the decommissioning component, I might ask you, David, to comment on that.

David Peattie: It is difficult to put a figure on it. The figures that are currently in the Report are from five years ago. That was the last time. Is that right, Jerry?

Jerry Haller: It is being updated.

David Peattie: It is being updated, so we will have a much clearer view when we see their updated figures. Frankly, only when we have the whole portfolio together will we be able to do our own assessment of the future cost, bearing in mind the topic we talked earlier about, whether we do continuous decommissioning or care and maintenance.

Q63 **Chair:** When will those updated figures from them be available.

Jerry Haller: Later on this year.

Q64 **Peter Grant:** Do you understand why a lot of people are wondering how anyone could have been so certain 40 years ago that nuclear power was, economically, such a good idea, when even now you cannot give a decent estimate as to how much it is going to cost us?

Sarah Munby: Of course I understand absolutely that question. It is worth reiterating something I said earlier in the hearing, when you were not here, Mr Grant. The proportion of the cost of future nuclear power stations that is represented by decommissioning, as opposed to construction and operation, falls very dramatically, because they are designed in a fundamentally different way, with decommissioning built in from the start.

I cannot reassure on whether decisions taken a long time ago represented reasonable value for money for the public purse. That is a long and complex question, hidden in the annals of history. I can give a lot of reassurance on the future value for money of the programmes that we are assessing now. The decommissioning costs will never be entirely certain, because you are projecting decades out into the future. There is, inevitably, a degree of risk. The sorts of levels of risk that we are talking about—Magnox being really challenging, the AGRs coming down, Sizewell coming down again and new nuclear construction—are very much more certain than the kinds of uncertainties we have talked about today.

Chair: I am sure our Committee in 50 years' time will look in the archives and find those words.

Q65 **Nick Smith:** It is good to hear that Mr Peattie and Mr Haller are joined at the hip on transfers and it is in hand. That is great. In the NAO Report,

paragraph 4.6, it says that the Department's business case in support of the renegotiated agreements estimates potential transfer costs and liabilities of around £300 million, but with a range up to £1.8 billion, five times as much. That is a really big range and a big difference in cost, is it not? Mr Nazir, what steps are you taking to minimise that risk, given we could have an increase in cost of up to five times, based on the NAO Report?

Umran Nazir: The full set of arrangements around co-operative working between EDF and NDA is what is going to drive all the benefits towards achieving a lower cost of transfer. That is seamless transfer and £14 million of the incentive funding is focused on seamless transfer, because that smooth transfer is essential in order to minimise that cost.

We could have tried to drive out some of that value through the negotiation of the deal, but there was huge risk involved. If we had agreed that a certain type of organisation would transfer over to the NDA with a certain plot of land and a certain number of contracts, that carried the risk that the NDA may have said, "Hang on a second; I do not have the right people here to do this work. You have not agreed the right people to transfer over. The organisation is too big. You should have made a number of these people redundant before you transferred over. I do not have the right plot of land". It creates too much risk.

Now, we have a framework where both sides are working really co-operatively together. As David said, we have already found £100 million worth of value through the use of joint stores at Hinkley and Hunterston. There is good reason to think that these costs are actually going to go down now and this framework will be a real driver towards the cost for the overall AGR decommissioning liabilities coming down.

Q66 **Nick Smith:** When you say the cost coming down, do you mean from £300 million down?

Umran Nazir: I mean that range decreasing and so the benefits driving towards £300 million with the benefits, rather than potentially not having any of those benefits.

Q67 **Nick Smith:** I am still trying to understand this range of £300 million at one end here and £1.8 billion at the other.

Sarah Munby: As a technical point, it is not a range from £300 million to £1.8 billion; £300 million is the central estimate and £1.8 billion is the worst-case scenario, if you see what I mean. There is not some expected number that is halfway between £300 million and £1.8 billion; £300 million is what we expect and £1.8 billion is the risk.

Umran Nazir: If we do not get the transfer right—if we do not get the land transferred right and the right people transferred—that has a potential cost, because it will take longer to decommission than it might otherwise have. When we did our business case assessment, that is what we

assessed, a potential range, but the benefits of £300 million are still there to be had.

Nick Smith: Could we have further detail on this, Chair? It is unclear to me—£300 million compared to a possible increase.

Q68 **Chair:** Let me try. Mr Peattie, one of the big unknowns in this transfer is people—the number of people, the skills, and therefore the pension liabilities. Do you have plans in your mind, as the NDA, as to what skills and numbers of people you are going to want?

David Peattie: We have a broad picture, again site by site. As discussed earlier, between EDF and the NDA over the next period, so three and a half years at Hunterston and then the years for each of the other sites, we will have to work up specific plans for each site and each employee base, then understand what the implications are and what the impact, for instance, of pension liabilities would be. That is one of the reasons why there are these big ranges. These numbers are not settled yet. We are not certain yet which of the skilled workers may wish to move across from generating to decommissioning or, indeed, where we may find the best place for them.

Q69 **Chair:** This slightly worries me because, given that the defueling is, in some cases, likely to only take three or four years, you are going to have to make some quite big decisions quite quickly. I am wondering how you are going to manage to do those on time.

David Peattie: One of the nine work groups laid out in the NAO Report is absolutely on that topic. Our respective expert teams from HR and leadership are on it as we speak.

Q70 **Chair:** It seems from the Report that there is a little bit of a cut-off. Why are you not allowed access to the site until it has been defueled? Given the spirit that you are telling us that there is between the two of you, why are you not accessing on site and starting these discussions now, well ahead of the completion of defueling?

Jerry Haller: We are. They're obviously still are sites and we are operating or defueling them, but the whole point of this arrangement is access to a centre and to our sites. In terms of the workstreams between us, as David has been talking about there, the people one is right at the top of EDF's list. We want to be able to engage. We have been engaging our people about the defueling to start with, to make sure we have helped as many people as possible meet their aspirations through defueling.

We want to have the same conversations as soon as possible about those that would like to be further trained, and maybe David's organisation might like to take them. We are also working with local colleges to see whether different deployment might work.

The people plan is probably the most important for EDF to work with the NDA on. That workstream is up and running. It is just somewhat early days

to have landed the plan and obviously we have to engage the people in those opportunities.

Q71 **Chair:** Given that EDFE is the site licence holder at the moment and that process with the regulator takes at least two years, are you absolutely confident that you will be in a position to have got the site licence holder status in time for the transfer?

Jerry Haller: It is for David's organisation and Magnox to get the site licence, but I believe, even very soon now actually, the joint teams are meeting with the regulator exactly on this topic. What is the road map that sees Magnox stood up with a site licence? We are obliged in the option agreement, but also motivated, to make sure that happens and is smooth.

David Peattie: That is a really key milestone, so that, when the reactor is declared fuel-free by the regulator, which is a very distinctive point in time, we are then ready to take on the site licence, through Magnox Ltd, from EDFE.

Q72 **Chair:** You are absolutely confident in all seven cases that you will be ready on time. Otherwise you will still have them as the site licence holder, yet they are wanting to hand it over to you, if the process is not complete.

David Peattie: You are absolutely right, Chair. That is theoretically possible. However, our experience to date, particularly at Hunterston, which will be likely the first to transfer, is going exceptionally well. Right now, I cannot see any reason why we should not be able to get the fuel-free verification and then a rapid transfer of the licence.

Q73 **Chair:** You presumably would have done all the pre-work, two years' worth. Just prior to signing the document, the regulator will have to go in and declare that it has been defueled properly. Then the licence is signed. Is that how it works?

David Peattie: That is exactly how it works. Bradwell in Essex is the Magnox station that has indeed gone through that. It has not just been declared fuel-free, as now all the Magnox stations are. Bradwell is actually now a fully delicensed site. Bradwell is the first one that has gone from a greenfield new build to 40 years of generation, decommissioning and delicensing. We have proved that we can go through that full cycle here in the UK.

Q74 **Chair:** Congratulations on that. That is a fantastic achievement. Mr Nazir, of the £100 million upside incentive to EDFE, only £14 million is there as an incentivised transfer. Is that a sufficient incentive to complete the transfer smoothly?

Umran Nazir: We have said that that £14 million is split into two, so it is £1 million-ish for each station and £7 million is floating. We can set that all towards one station if we wanted, maybe even the first station to transfer. Once you get that first station transferred and have understood how it

works best in terms of transferring people and a right-sized organisation, that lead and learn approach should then transfer to all the other stations.

We have not committed to that yet. We have not committed to that £7 million floating to anything, but we have appreciated that we need some flexibility there. We think that that seems like a reasonable figure. If split between two stations, for example, that is still quite a big incentive in comparison to the wider range.

Chair: I sense, Mr Peattie, despite my best endeavours, that Mr Smith is not satisfied with this whole business of transfers.

Q75 **Nick Smith:** I want to take a deep dive on a particularly key aspect of all this. I want to come back to this business about business case uncertainties. Where have you got to about the negotiations over the pension contributions for the people—is it at Hunterston? That is going to be occurring very quickly, is it not? We know on this Committee that pensions take a lot of time to sort out. This should be right over your immediate horizon. Where have you got to with that? Give us some comfort that it is in hand.

David Peattie: It is in active live discussion between our respective companies, NDA and EDF. Currently, those employees are EDFE employees, so it is perhaps more appropriate for Jerry to comment.

Jerry Haller: We have recently changed our pension arrangements from a defined benefit to a defined contribution scheme, so Hunterston employees are employed on that basis going forwards now. As David said, the teams are now talking about the fact that those that would transfer would transfer into a new NDA-related scheme.

Umran Nazir: I will make one further, hopefully helpful, distinction. We have to move quickly to defuel these stations because time equals cost. Once they are defueled and we have fuel-free verification, the cost of each of these stations decreases exponentially.

At that point, you could take up to a year to make sure the organisation transferred was a right-sized organisation, so you had all these things sorted out before that transfer took place. It is not a case of defueling and automatically shoving over the organisation to the NDA. There is a period along which you have decreased the cost and there is a period of appropriate consideration.

Q76 **Nick Smith:** We understand that and that is important. We get that. I wanted to push you on a specific thing to see if you had made good progress on an issue where, often, there is devil in the detail. Your staff, and surely your staff, will be affected by that, so thank you. It will be interesting to see how that goes in the future.

We have heard that a lot of these sites, the Magnox and AGR sites, are very close to each other. What plans do you have to deliver efficiencies across both the decommissioning programmes, please?

David Peattie: Three of the sites are co-located with existing Magnox sites—as a reminder, Hunterston A and B in Scotland, Dungeness A and B in Kent and, in Somerset, Hinkley A and B. That is the first wave that will come across. Synergies from local supply chain will be really important. Local suppliers and businesses will be able to, ideally, have more work to do because the site is doubled, whether that is support services or deconstruction.

We have already talked about the savings on the joint using of stores. About £100 million has been saved there already. There may be other things, much more local, site-by-site specific, that we have yet to discover. Once we bring the other three sites in, Hartlepool, Torness and Heysham, where there are two stations, then we have the portfolio effect of bringing all those sites together with the Magnox sites, where we should see some real economies of scale.

One thing I have been dedicated to do since taking on this job was to end the parent body organisation model under which the NDA previously ran its sites. That was part of the problem around the Magnox contract that I have discussed with this Committee before. We now have the 17 sites managed directly by the NDA on behalf of the taxpayer, without the involvement of the private sector consortia in the management of the site. Incidentally, that saves, in fee alone, £100 million a year for the taxpayer.

We have built this family of businesses now and the next phase is to bring these optimisations on. It is a great honour for me to be able to lead this fantastic organisation with terrific workers and take it to this next level. Being trusted to do more, by having the AGRs as well, is a great vote of confidence in what we are about to do. It is a great challenge. There will be problems, I am sure, but I know that the organisation and I are really well up for that.

Q77 **Nick Smith:** Can you put a value on the likely economic efficiencies of this work?

David Peattie: Given that we have already delivered over £100 million from simply sharing of stores at two sites, I think we could project benefits certainly in the hundreds of millions. I would hope that it should extend into the billions. I look forward to coming back to this Committee, and the scrutiny that I know I get from the Department, and really showing, to auditable quality, where we have seen these benefits.

Chair: We will be the first to congratulate you if you get to those sorts of figures.

Q78 **James Wild:** On the transfer, I want to ask about small modular reactors and the potential use of these AGR sites, given the strong support in those communities for nuclear power. Clearly, the precise footprint to be transferred, as we discussed, is unclear. You are working hard at it. What are you doing to give more clarity to SMR providers about whether it is

going to be possible? Are you in discussions with them about potentially using some of these sites?

David Peattie: For the NDA, we have the 17 sites around the UK and then the additional AGR sites. We have been making and are obliged to make all our sites potentially available for small modular reactor development. After all, these are sites that have been or now are licensed for nuclear activity. We are rightly proud of our relationships with our local communities through the site stakeholder groups or the councils and everybody we work with.

In theory, all our sites could potentially be made available. Of course, the Department is also in touch with potential suppliers, who may wish to come and build their SMRs on our sites.

Q79 **James Wild:** That is in theory. What about in practice? Do you have a mandate from the Department? Do you need any more powers to get on and have those discussions? BEIS is obviously investing in some of these projects. It is happening.

David Peattie: We are in active discussions day in and day out. This is a live topic. We are literally, in the last few days, seeking formal permission to engage more directly.

Q80 **James Wild:** You are still needing permission from the Department to do that.

David Peattie: Formally we do. Under the charter that governs what we do, we are required to get formal permission. Whenever I have asked before, it has always been readily available. I am not particularly concerned.

Q81 **James Wild:** Do you have to do that on a site-by-site basis? You do not have a general mandate to negotiate to open these sites up.

David Peattie: An eventuality like we are talking about has not arisen before, so all options are available and we are in discussion with the Department about what the right way forward is.

Sarah Munby: The only thing I would add to what David has said is that we would seek to do that in close communication and partnership. From a departmental point of view, we are interested in the NDA sites but any other licensed sites as well. It is about making sure that we are working together. I do not think there is any potential area of conflict here. It is more about making sure that the left and right hands know what each other are doing.

Q82 **James Wild:** What about EDFE?

Jerry Haller: In terms of EDFE, we are into large-scale at Hinkley Point C and, hopefully, Sizewell C. We are very keen to discuss for the existing AGR sites, for the land around there that we own that is the stuff that is not needed for decommissioning. We are in active conversations with people like Jill Mortimer at Hartlepool, which could be a good site for SMRs

but also advanced modular reactors, which use the same sort of technology that we use on the AGRs. That discussion is happening and the same across in Lancashire with the Heysham site as well. Again, that could be a good siting for small modular reactors. We are engaging and are keen to engage in those conversations.

Q83 **Craig Mackinlay:** On the back of my colleague Mr Wild, you spelled out what we are trying to get to very well, Mr Peattie. Funnily enough, I know a lot of these sites, because I have been a big sailor over the years and sailed by them. The Bradwell site, say, started, has done its 40 years, now been cleaned up and is back as greenfield land, effectively. What we are trying to get to is that, instead of doing that final phase, which is obviously very expensive, you continue a nuclear history and a future on these sites, so you do not do that last bit, which I can imagine is very expensive, and it is already licensed for nuclear use.

It would be taking out some of the potential liability that falls upon your agency if we were to continue some of these already registered sites for nuclear use into the future. It is not only that. You have, I would assume, a very big electrical grid function somewhere adjacent to as well. Rather than go to a new virgin bit of land for new nuclear and small modular, it would seem to me to make sense to use the footprint we have. All we are asking of you is to please do it if you are not, but it sounds like you are, so you may have answered it.

David Peattie: We are. You make a really excellent point. We are close to the grid. We have the licensed site. We have the willing communities.

Q84 **Craig Mackinlay:** That is what I was saying. The communities are important, because they are used to these things.

David Peattie: They are very important. Yes, that is exactly right.

Q85 **Chair:** Ms Munby, the Report makes it very clear that the difference between care and maintenance of a site that has nuclear rods still in it, at £140 million a year, as opposed to a site that has had them extracted, at £25 million to £35 million a year, can soon rack up huge costs if these sites are not defueled on time.

On our incentive that we were talking about earlier, it is rather to my point about whether £100 million is adequate. That is a side point. The real question for you is what pressure you can apply to EDFE to make sure that it defuels these sites on time. Particularly, it is going to be defueling three and four at a time at some phases during this defueling. What pressure can you put on them if they are falling behind their schedule?

Sarah Munby: First, it is the incentive mechanism. That is meaningful, substantial and a big part of the picture here. It is also worth saying that we have a range of backstop rights to direct. EDF currently retains, as it were, strategic primacy over its site. It is deciding how to do defueling. They are the right people to make that decision.

I am absolutely not expecting to use these rights, I should be very clear. I do not think there is anything to indicate that there is any requirement to, but, if we can see material cost saving opportunities from doing something in a different way, we retain the right to direct EDF to do that. The co-operation that David and Jerry have described is backed by financial incentives and ultimately by a hard intervention capability. As I say, I do not see anything in the current set-up to make me think that that is going to be required, but it is useful to know that it exists.

Q86 **Chair:** On the other side, NDA, Mr Peattie's organisation, is going to have a huge workload, with Magnox, AGRs, this transport system it is talking about, Sellafield and a disposal facility. There is a huge amount on its plate. You have just put in place a huge new range of governance, which you have written to us about. It is a very comprehensive range of governance. Are you satisfied that you have the range of governance in place and the scrutiny over NDA to ensure it is meeting all those vast numbers of activities on time?

Sarah Munby: The short answer is yes. It is worth saying for the listeners, as it were, that the NDA has recently been through the Magnox review, coming out of the challenges with the Magnox contracts that David was talking about, and a full departmental review, essentially where we have gone root and branch into whether this is set up right and whether we have the right governance over this. Yes, we have confidence. Do I think that will need continual renewal and focus? Yes.

Our governance is important; do not get me wrong. That is on me to ensure that it is in the right place. The NDA itself has taken on really important steps in the way that it is run: the One NDA programme that David has been talking about, the increase in commercial capabilities, the strengthening of the NDA board. It is not just about our impact on the NDA. It is about the NDA itself as an organisation evolving, improving and justifying, ultimately, the decision to give the NDA more responsibility in business. It is very high on my list of things to pay attention to and be concerned about for exactly the reasons that you describe, but we are currently seeing a really reassuring trajectory.

Q87 **Chair:** Mr Peattie, in reading these new governance arrangements, which run to several pages, if I were in your shoes I would be pretty worried about stepping out of my front door for falling foul of them. How do you feel about these new arrangements? I know your boss is sitting alongside you, but imagine that there is a brick wall between you. Can you be totally candid?

David Peattie: I can. One of the great things is that these arrangements have been very much co-created between the sponsor team, Sarah herself, and me and my executive leadership team. We have a very simple organisational structure now with these four pillars in the NDA, which has radically simplified what we do. I have brought in now a completely new executive team and commercial folks to help to be ready to lead this next phase of our development.

I am confident that we have the squad now to take this next big step for us. We are getting strong support from the Department and good challenge as well at the appropriate time. Right now, we are set up for a strong period of performance over the coming years.

Q88 **Chair:** Ms Munby, we talked about the financing arrangement, but this is a very big project for your Department. Do you feel that you, as a Department, need more scrutiny? How about putting this into the Government's major projects list, for example, so you get wider Government scrutiny on what your Department is doing?

Sarah Munby: It is an interesting question. Broadly speaking, my expectation would be that this will come on to the GMPP that you are referring to in due course as it moves into NDA control, along with various other pieces of the NDA puzzle that are subject to that form of scrutiny. We would expect that.

I do not think that GMPP scrutiny would really be appropriate right now for what is, ultimately, a programme primarily being delivered by EDF. That is not to suggest that I do not think it should be scrutinised. Umran, you might like to talk to it. We have had strong involvement from the Cabinet Office and HMT through this process. It is not in any way about rejecting scrutiny. I am just not sure that the framing of GMPP is currently the appropriate framing.

Q89 **Chair:** At what stage would it be appropriate?

Sarah Munby: More or less at the point where this becomes primarily an NDA programme. Just as the Magnox programme receives that kind of attention, you would expect this to roll into that, as it moves over into NDA control. Umran, do you want to add anything?

Umran Nazir: We had very similar concerns from Treasury and Cabinet Office when we were going through the approvals for this business case. As part of those approvals processes, we committed to provide metrics that would be akin to GMPP to provide that assurance to them. We will develop those and we are in the process of developing them. They are keen to see them, so we have committed to that, as part of the approvals process.

Q90 **Chair:** Ms Munby, at the top, I gave a figure of the overall cost of nuclear decommissioning of £130 billion, admittedly over 100 years. There is an estimate that ranges up another £100 billion on top of that in the Report and that does not include the decommissioning of these AGR reactors. We are talking about vast figures here. What mechanisms do you have for reporting the nuclear decommissioning project as a whole to Parliament?

Umran Nazir: There is an annual report that NDA does about its liabilities. That has a cost for the total NDA provision, as it is called. That is reported as part of its annual report. That provides you a full range. There is a point estimate and a range cost of expending all those liabilities. To that will be

added the AGR liabilities, now that the NDA is going to take those over. Of course, that will flex as that liability is reestimated by EDF over time. That is our best estimate for the full cost of nuclear decommissioning. That has been produced annually for quite a while now.

David Peattie: From an earlier recommendation from the Public Accounts Committee, the NDA now publishes something called our mission progress report, which is available on GOV.UK. That lays out what the taxpayer gets, as it were, in return for these vast sums of money that we are putting into the clean-up and the decommissioning.

Chair: I am delighted to hear about these annual reports. The reason for the question about parliamentary scrutiny is that a small alteration in the timeliness of this could amount to a huge amount of money. That is why it is really important that Parliament has an opportunity to scrutinise it on a fairly regular basis.

Q91 **Peter Grant:** Can I come back to the operation of the Nuclear Liabilities Fund? My understanding of it is that, when there is expenditure on qualifying activities by EDF Energy, it then submits a request to the fund. The fund previously would confirm that it was a qualifying expenditure. There is now some kind of value for money check done and then the money gets paid. What is the basis of the value for money checks that you undertake? How robust a check on value for money can you get when there is not a market in the UK? There is only one company doing this in the UK.

Umran Nazir: We have a team called the NLA team. It is a team within the NDA. It has a reasonable amount of operational freedom. They are experts on decommissioning costs, so they review the costs that EDF incurs. It is BEIS's agent and is best placed. It has been doing that job since 2009, and it provides an assessment to BEIS and the NLF trust about whether that is value for money.

Q92 **Peter Grant:** How did they become experts in decommissioning costs? Who is it that confirms that they are experts?

Umran Nazir: That is a good question. There are reference points for these costs. There is the decommissioning of the Magnox stations. There is decommissioning globally. This activity is not so completely unique that there are not reference points, so they use those. In terms of who defines them as experts, sorry, I cannot answer that. They are experts in the sense that they have been doing this role since 2009 and, indeed, you have the auspices of the NAO and other bodies able to review their activities.

Q93 **Peter Grant:** Finally, Ms Munby, as Permanent Secretary, are you satisfied that your Department has sufficient unrestricted access to the books of EDF Energy to be able to confirm that what looks like good value on the surface actually represents good value? Do you have any issues about the information that you are allowed to ask for, not only from them but from the other companies in what is, after all, quite a complicated group structure?

Sarah Munby: There are no issues. The negotiation process that we have been describing here has led to the agreement that underpins the conversation. As you can imagine, a lot of what the real-life negotiation actually looked like, once we were beyond a statement of principles of how this should work was getting into the technical detail of what a qualifying cost is, how that is measured, what access and what the processes to check on that will be.

That is very long. There are hundreds of clauses that go into making this up. It has been well worked through by everyone sat at this table. I come back to the point that the Chair made. There are serious risks here if we get these things wrong, so I am certainly not relaxed about the status of this programme. It could become very costly if some of the challenges that we have talked about are not managed properly.

If I look across the full portfolio of things on my plate, this is one that is in good shape. I do not have any immediate concerns, other than that there are big amounts of public money at stake and this needs a very high level of continued scrutiny. That is what Umran and his team will continue to provide.

Q94 **Chair:** Mr Peattie, do you have any news or an update on the deep waste facility?

David Peattie: We are engaged now formally with four communities, three in west Cumbria and one at Theddlethorpe on the east coast of Lincolnshire. That has been part of the formal process now of engaging with their working groups to begin a new period then of evaluation for geological and community appropriateness of building the geological disposal facility. We are still some years away from a decision, but right now we have four community groups engaged with us. It will be the process now that we work through, in line with Government policy, to build a GDF in the UK.

Chair: That is very helpful. There are no further questions. May I thank you all very much for your attendance?