

Business, Energy and Industrial Strategy Committee

Oral evidence: Leaving the EU: implications for the nuclear industry, HC 378

Wednesday 1 November 2017

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Watch the meeting

Members present: Rachel Reeves (Chair); Drew Hendry; Stephen Kerr; Peter Kyle; Mr Ian Liddell-Grainger; Rachel Maclean; Mark Pawsey; Antoinette Sandbach.

Questions 1 – 162

Witnesses

I: Dr Mina Golshan, Deputy Chief Inspector and Director for the Sellafield, Decommissioning, Fuel and Waste Division, Office for Nuclear Regulation; Ben Russell, Head of Policy and External Affairs, Horizon Nuclear Power; Peter Haslam, Head of Policy, Nuclear Industry Association; Andrew van der Lem, Head of Government and Public Affairs, Nuclear Decommissioning Authority.

II: Richard Harrington MP, Minister for Energy and Industry, Department for Business, Energy and Industrial Strategy; Katrina McLeay, Head of Safeguards and Delivery, Department for Business, Energy and Industrial Strategy; David Wagstaff, Head of Euratom Exit Negotiations, Department for Business, Energy and Industrial Strategy.

Written evidence from witnesses:

- [Horizon Nuclear Power - written evidence](#) | [PDF version \(113 KB\)](#) 
- [Nuclear Industry Association - written evidence](#) | [PDF version \(76 KB\)](#) 
- [Nuclear Decommissioning Authority - written evidence](#) | [PDF version \(76 KB\)](#) 
- [Department for Business, Energy and Industrial Strategy - written evidence](#) | [PDF version \(93 KB\)](#) 



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Examination of witnesses

Witnesses: Dr Mina Golshan, Ben Russell, Peter Haslam and Andrew van der Lem.

Q1 Chair: Thank you very much for coming to give evidence to our Select Committee today on the civil nuclear sector and Brexit. For the record, it would be good if you could introduce yourselves and where you are from before we get started with the questions.

Dr Golshan: Good afternoon. I am Mina Golshan, deputy chief inspector and director at Office for Nuclear Regulation. I am also senior responsible owner for implementing the safeguards regime in the UK.

Peter Haslam: Good afternoon. I am Peter Haslam. I am head of policy at the Nuclear Industry Association, which is the trade association of the UK nuclear industry.

Andrew van der Lem: Good afternoon. I am Andrew van der Lem. I am from the Nuclear Decommissioning Authority and I am the head of government relations there.

Ben Russell: I am Ben Russell. I am head of policy and external affairs at Horizon Nuclear Power.

Q2 Peter Kyle: Thank you for coming here today. I would like to quickly open up to the whole panel, starting with you, Ben. Do I assume that you think it is right and correct that we now maintain regulatory parity with Euratom going forward into the foreseeable future?

Ben Russell: Absolutely, yes. For ourselves and the wider industry, the key is to take the regime that was working and the arrangements that have been working for the past 40 to 50 years, and replace and replicate them in a domestic context. That is important. The Government said the same. We would certainly say the same: that there is no dilution in the standards in any aspect, including safeguards.

Andrew van der Lem: I have a very similar answer. We do not see any reason to change the regime in any substantive way and obviously minimal change will help with a transition process as well.

Peter Haslam: I agree with my two colleagues. It has worked very well so far and there is no reason to change it.

Dr Golshan: Same here: our aim in the Office for Nuclear Regulation is to implement a regime that is equivalent, in terms of the outcomes that it aims to achieve, to what we have in place at the moment.

Q3 Peter Kyle: How confident are you that the ONR can set up and deliver a replacement by March 2019?



Dr Golshan: I have been very clear from the outset in previous evidence sessions, and in discussions with industry as well as BEIS, that it would be unrealistic for us to expect to achieve an equivalent regime to what is in place currently by the time we officially leave Euratom, and that is March 2019.

Q4 **Peter Kyle:** What is an appropriate timescale for us to think on?

Dr Golshan: My current project plan is that we establish a regime that intends to meet UK international obligations when we leave and then build upon that to achieve a system that is equivalent to Euratom.

Q5 **Peter Kyle:** What are you basing your working assumptions on? We need a date for when this will be up and running. Very quickly, is there a date in your mind?

Dr Golshan: We have a reasonable level of confidence that we can achieve what is required for the UK to meet international obligations by the time we leave. Anything beyond that is an assumption in the project plan that there will be a period of two years, at which point we will be up and running.

Q6 **Peter Kyle:** What are you basing that two-year programme on? Have you looked at other countries and seen how long they have taken to set their regulatory frameworks up?

Dr Golshan: We have done some benchmarking. It is a tall order: it is ambitious; it is challenging. The reason I say that is because, in order to meet the first objective, we need to have an information management system in place that allows us to collect the relevant data, process that and make appropriate reports to the IAEA and meet other reporting obligations.

The second element is the verification system, which is what Euratom has in place at the moment. For that, we need an appropriate number of inspectors, we need to train them, and we need to give them the equipment that they need to undertake their activities.

Q7 **Peter Kyle:** Of those, which is the highest in your risk register right now? What do you perceive as the most challenging?

Dr Golshan: These work streams are running in parallel. We have no time, in a way, to run things sequentially. We are developing a system—at the moment in the proof of concept stage—to implement the information management system. At the same time, we already had a recruitment campaign, which concluded, and we have increased our numbers by four from seven. A further recruitment campaign is planned. We needed to wait until the Second Reading of the Bill was complete before embarking on that, clearly, given that we are taking on a liability here.

Beyond that is a matter of training inspectors. It usually takes between 12 and 18 months to get a specialist and then train them to become an



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inspector. I should note that only very recently have we reached an agreement to discuss details of what the current arrangement looks like with Euratom, and those discussions will hopefully start soon.

Q8 Peter Kyle: You have mentioned jobs and recruitment a number of times already. How many jobs will be created in the set-up of this new department?

Dr Golshan: From the outset, it does not look significant, but it is significant because we are looking at a limited pool of expertise. In order for us to get to a point where we can deliver a regime by 2019 we need about 10 to 12 additional inspectors, and, for us to be up and running by another two years after that, probably around 20 to 25 inspectors.

Q9 Peter Kyle: Do you have an idea yet of the budget for your department or the new organisation?

Dr Golshan: The Government announced that the expected budget would not be dissimilar to what we have in place currently in the UK, which is around £10 million. There is an informal agreement with BEIS currently and we need to put that on a more formal footing.

Q10 Peter Kyle: Have you agreed who is funding it? It will be the department.

Dr Golshan: That is the case, yes. Well, that is not clear and the explanatory notes in the Bill suggest that it is something that needs resolution.

Q11 Peter Kyle: Finally, from your testimony so far, there is a lot of aspiration and very little fact that we can know yet. You are being very precise with your language so that you do not overcommit, which I completely appreciate, but from sitting where I am sitting we are not talking about setting up a dog-walking path through the countryside here. We are talking about the way that our nuclear industry is regulated and how our expertise is shared with our neighbouring countries. Does this uncertainty cause you concern?

Dr Golshan: I highlighted the risks as they relate to ONR. Another element to note here is that, in order for this to be in place, we need the secondary legislation that sets the mechanism for us to deliver a safeguarding regime, and of course we are working with the Government to draw up the details on this. However, time is short.

Q12 Peter Kyle: Everything sounds like it is at the beginning, not in the middle and not near completion. It is scoping.

Dr Golshan: It is certainly not near completion. There are areas where we have made some progress and, as I said, we are very near completing the proof of concept for the safeguards information management system, but additional recruitment and sorting the details are still to be done.

Q13 Antoinette Sandbach: At the moment, we access a number of nuclear



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co-operation agreements via Euratom. How long will it take to replicate those nuclear co-operation agreements?

Dr Golshan: You are looking at me. It is probably best for the Government to answer that question. All I can say is that we are working with the Government very closely to provide expert advice to them in relation to those negotiations. That is a certain element of it and there is much more work to be done.

Q14 **Antoinette Sandbach:** What is your anticipated timeframe?

Dr Golshan: That is really not for me to answer. That is a question better asked of the Government.

Q15 **Antoinette Sandbach:** Does the Nuclear Industry Association have an idea of how long it might take?

Peter Haslam: I am not sure that we can answer that precisely either. The first step is that we need to devise a domestic safeguards regime and get this agreed and outlined with the IAEA. That is the first thing. Then the Government need to negotiate the nuclear co-operation agreements with the key countries. They have identified four key countries, which are the US, Canada, Japan and Australia, and we agree with that. That will have to be on the basis that the safeguards regime is in place in the UK.

As an industry, and going on what Dr Golshan has just said, we are obviously concerned that the safeguards regime might not be in place in the requisite timescale or at least for March 2019.

Q16 **Antoinette Sandbach:** What about if there is a transition period?

Peter Haslam: That is why we need a transition period. It is absolutely vital that there is a transition period and that is something that we have been asking the Government to pursue.

Q17 **Antoinette Sandbach:** Do the other panel members agree with that assessment?

Andrew van der Lem: Very much, yes.

Ben Russell: I certainly do on the need for a transition period, yes.

Q18 **Antoinette Sandbach:** Really it is only once the approval is going through the IAEA that we can move on to the next step of NCAs.

Peter Haslam: The NCA negotiations can start, but they cannot be signed off unless the safeguards regime is in place.

Q19 **Antoinette Sandbach:** Will we need to operate old and new safeguards regimes concurrently?

Dr Golshan: As to what the legalities are, I could not comment, but I would concur with the view of colleagues here that it would be significantly advantageous if we could have a parallel-running period



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where we are benefitting from the services that Euratom provides, and our inspectors can work with it to understand the mechanics of verification.

- Q20 **Antoinette Sandbach:** One of the issues that may happen post 2019 is WTO tariffs. Do you agree with the evidence we have had that tariffs on nuclear goods and materials will be relatively insignificant? If the answer to that is yes, can you address non-tariff barriers that might cause problems?

Peter Haslam: It is clear that, under the WTO rules, the UK would need to pay a tariff in order to export goods to the EU and would be subject to quantity restrictions. As you say, the consensus is that the impact on the nuclear industry would be less than on certain other industries. I have been told the food, drink and tobacco industries and the automotive sector are more affected. But it would have an impact.

- Q21 **Antoinette Sandbach:** Do you know what the level of tariff would be?

Peter Haslam: I do not, I am afraid.

Andrew van der Lem: It would very much depend on what the actual underlying products are. Like colleagues, I am restricting it to nuclear decommissioning: we do not think that tariffs are a significant problem in our area.

The non-tariff barriers have already been alluded to somewhat because safeguarding regimes can be thought of as non-tariff barriers as well. The first four NCAs, nuclear co-operation agreements, have been prioritised, rightly because they are required legally or for policy reasons in those countries, but other countries have NCAs and they are more facilitative in nature.

- Q22 **Antoinette Sandbach:** What about the movement of skills and people?

Ben Russell: From the project-specific point of view, as Horizon, we do not see the introduction of tariffs being a major issue. Most of our equipment, certainly at the nuclear level, will be coming from Japan anyway, so is outside of any EU considerations.

Skills is a significant issue, particularly from our perspective with regards to the construction period and the pool from which we can draw our construction workforce. For us, that will be around 8,500 at peak and we will clearly be looking to take much of that from Anglesey, where we are building our first site, north Wales, Wales and the UK. But precedent shows that a sizeable contingent for any large infrastructure project comes from the EU.

The thing to add on skills is that it is a national issue. It will be a project-specific issue for us, yes, but if you look at the pipeline of energy infrastructure, transport infrastructure and other large projects that come



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in, there will be a draw on a similar pool. If that pool of labour shrinks, that is clearly an issue.

Q23 **Antoinette Sandbach:** What about from the ONR's point of view?

Dr Golshan: In terms of skills and expertise, we do not have many EU nationals or foreign nationals in our organisation. However, from a regulator's perspective, we want to see an industry that uses suitably qualified and experienced individuals to conduct their operations, and that goes from operating and running the facility to construction and commissioning. From a safety perspective, safeguarding aside, we would like to see an industry that is fully capable.

In terms of equipment, my responsibility is decommissioning and waste. I am aware that some of our licensees use American companies to provide them with the equipment and expertise they require. Clearly, the concern would be if decommissioning for these reasons is stopped, altered or delayed.

Peter Haslam: There will be quite a big impact on other parts of the new-build programme, particularly on the Hinkley Point project, and skills will be required there. Hinkley Point is expected to have 25,000 workers during the construction phase, so it will rely quite heavily on EU and other international workers to ensure that it has all the skills it needs.

It is absolutely vital that, when the Government get to the point of looking at potential immigration controls post Brexit, they have the right arrangements in place, to ensure that these skills are not prevented from coming into the UK to contribute to the programme.

Chair: Would you mind talking a little more loudly? The air conditioning is quite loud and it is difficult to hear the answers.

Q24 **Mark Pawsey:** We have heard from all our witnesses, particularly Dr Golshan, about the time pressures in creating a new body and shortages of skills, so we will face some challenges as a consequence of leaving Euratom. Is there any element of upside? Are there any positives? Are there any good things that can arise from this?

Dr Golshan: I do not see that the current system puts any burdens on us and, therefore, that there would be a significant benefit in coming out of the current system.

Q25 **Mark Pawsey:** Is there not a single benefit that you can think of?

Dr Golshan: From a regulatory perspective, as I say, I do not see that there is a dis-benefit at the moment.

Q26 **Mark Pawsey:** May I ask the same question to each of the witnesses?

Peter Haslam: Our perspective is that we cannot see very many opportunities either. We benefit from the existing relationship with



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Euratom and our concern is to ensure that we continue to have those benefits if we leave Euratom.

Andrew van der Lem: Restricting the question to exit from Euratom specifically, I would say that my answer is as everyone else.

Ben Russell: Our first preference would be for the status quo. If we cannot have that, it is to replicate as nearly as possible what we had.

I am not sure that I would call it a benefit, but from a project-specific point of view we are owned by Hitachi and there is a lot of store, it seems, being put into the future UK-Japan relationship post Brexit. Our project being at the centre of that is clearly interesting, but I am not sure that I would go so far as to say that it is a benefit from leaving the EU.

Q27 **Mark Pawsey:** I just wonder, if we are setting our own regulatory regime, whether we might be able to reduce the regulatory burden in some way. Would that be a benefit to the industry?

Ben Russell: Speaking from our perspective, we do not see this as an opportunity or an occasion to look to reduce the regulatory standards. They are proportionate to the industry's working, they work well, and we should not see Brexit as a chance to dilute those.

Peter Haslam: In terms of safeguards regulation, we will be responding to the directions laid down by the IAEA internationally, so it is likely that the regulation would be very similar to that we implemented anyway.

Q28 **Mark Pawsey:** Is there no element of us taking control here?

Peter Haslam: I do not think so.

Q29 **Mark Pawsey:** Does any opportunity arise to increase our exports? Might that be something that we can do by managing our affairs ourselves?

Peter Haslam: In terms of nuclear exports, one of the key issues that we have at the moment is having relationships with the other countries via the NCAs. That is one of the reasons why it is very important that we have our own nuclear co-operation agreements in place once we have left Euratom.

Q30 **Mark Pawsey:** Ben, do Brexit and leaving Euratom pose any challenges in the development of new nuclear? We know about the Government's interest in small modular reactors. Might that process be accelerated in any way as a consequence of this change?

Ben Russell: In terms of the fundamentals for our project, we do not see those being affected by Brexit. There is still, we would argue, a strong need for nuclear in the future energy mix. Government policy is still very supportive of nuclear and our project helps deliver that policy. As a project, we have strong technology, a good site up on Anglesey and a strong backer, so we do not see Brexit affecting us in that way.



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As we set out in our response, there are issues that need to be dealt with, especially that will enable us to move from the development phase to the construction phase. Some of those are delivered through or related to Euratom, but our broad view is that, given time, i.e. a transition period, and a requisite amount of focus, those can be replaced and replicated, enabling us to continue as before.

Q31 Mark Pawsey: Is there any element of looking to build relationships with partners from across the world rather than working closely with our European partners, which might have been the case under Euratom?

Ben Russell: Again, from a project-specific point of view, we are owned by Hitachi so we already have a non-EU relationship, as it were. Nuclear projects by their nature are global projects and that will involve EU companies, EU labour, non-EU companies and non-EU labour. Obviously a key driver for us in developing our project is that as much of the benefit flows to the UK as is possible. We are already there in terms of those global relationships.

Q32 Stephen Kerr: If our existing Euratom arrangements are not replaced before we leave, how would that affect our nuclear decommissioning and waste management programmes in this country?

Andrew van der Lem: Can I just clarify the question? You are essentially asking about if our safeguarding regimes were not recognised by the IAEA. It would impact on our ability to move materials on a cross-border basis, clearly. It is a hypothetical situation—

Q33 Stephen Kerr: Do you mean “unlikely”?

Andrew van der Lem: It may not be an unlikely situation, but putting that to one side, on the basis that it is an unlikely situation, we know that there are difficulties in moving cross-border material, as far as the NDAs’ estate is concerned. We would put in place mitigants to deal with that. Those mitigations might, for example, include importing more spare parts, materials that we require for decommissioning before the end of—

Q34 Stephen Kerr: A stockpile?

Andrew van der Lem: Stockpiling material and potentially changing some of our existing programmes are examples. It would not affect safety and security on our sites, so some action would have to be taken. From a decommissioning point of view, where the cross-border element is perhaps less important than other parts of the industry, it is less significant, but action would have to be taken. It would depend a little on the regulatory regime that we put in place because we would be putting in place something domestically as well.

Q35 Stephen Kerr: What about the cost impacts?

Andrew van der Lem: It is very difficult to say at this stage but our annual expenditure is £3 billion per year. It would probably be a small proportion of that. An overwhelming amount of our spend is on labour.



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Many of our programmes would not be impacted in the way that we are describing, so I will not put a number on it here, but it is a small proportion of our overall expenditure.

Dr Golshan: One of our licensees, Magnox Limited, has a parent body organisation, Fluor and Cavendish Nuclear. Fluor is an American company. When we talk about provision of goods and services, people, i.e. services in this context, would be individuals who work in the UK and are American. Clearly, mitigations need to be put in place to go forward with the management of that organisation post March 2019. Similarly, there are other American companies that provide services to UK nuclear decommissioning and, as my colleague said here, mitigations need to be put in place to ensure continued activities in that area.

Q36 **Stephen Kerr:** How does all this impact the UK's high hazard risk reduction programme?

Andrew van der Lem: Again, it is an unlikely situation. It is difficult to answer, because we do not know what domestic measures we would put in place unilaterally to deal with a cliff-edge situation, which you are describing. But the high hazard would be included within what I said earlier: some action would have to be taken to prepare for an abrupt transition and some activities or programmes would have to be changed in some way.

Q37 **Stephen Kerr:** It sounds hugely disruptive in that scenario.

Andrew van der Lem: It would be disruptive. As I say, within decommissioning there are limits because of the nature of our activity, and we are working within a policy environment where the Government are intent on avoiding that level of disruption in this area, so work is ongoing to deal with this. I appreciate where your question is coming from, but there are a large number of unknowns.

Q38 **Stephen Kerr:** There is a lot of work going on to prevent the cliff edge, but are there also contingency plans?

Andrew van der Lem: The most important work that is happening is the work with the IAEA and the safeguarding regime that you are going to be talking to the Minister about later. If that is a smooth process with a transition period put in place, what we are taking about now will not be disruptive in the slightest. That is the main mitigants.

As that develops, the NDA and probably other operators will plan accordingly to take action. We do not think that there is any risk to safety or security on any of our sites, even in a kind of cliff-edge situation as you describe.

Q39 **Stephen Kerr:** Did you want to say something?

Peter Haslam: The point is much broader than decommissioning. Andrew has explained what the effect would be on the decommissioning



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programme, but it is going to affect the operating power stations and the new-build programme as well, if we do not have things in place.

We at the NIA sent, with our evidence to the Committee, some illustrative examples of cliff-edge scenarios, which I would commend to you to have a look at, but that covers such issues as importing fuel for the Sizewell reactor, for example, importing equipment, and other things that we need to have the arrangements in place to enable to go forward after March 2019.

Q40 Rachel Maclean: We are seeking to understand what impact there will be on nuclear fusion research and the project at Culham. We understand that there are concerns about the continuation of this project. Given that the Government have guaranteed to continue funding, can the panel say why they consider that this project could be at risk as we leave Euratom and under Brexit?

Peter Haslam: At the moment, that programme is part of the EU programme and we do not know at the moment what its status will be after we leave the EU. It is very important that we have clarity on this. The Government have said that they want to seek continued participation in international fusion projects such as JET, but they have not said so far how they are going to achieve that.

There are some options, as I understand it. One of them would be to have an association agreement that would enable the UKAEA to continue what it is already doing in terms of nuclear fusion research. It would be a bespoke agreement that would have to be acceptable to both sides, both us and the EU. If we are going to do that, we need to act quite quickly to trigger the process. Time is passing.

Q41 Rachel Maclean: When would that need to be agreed by? Could you put a deadline on that?

Peter Haslam: In your question to us, you talked about the fact that Austria is taking over the EU Presidency in July 2018. It would need to be sewn up before then, basically, because, as you suggest, the Austrians are anti-nuclear and we understand that they are not prepared to deal with Euratom issues during their Presidency. It would need to be done before then, which means that the UK needs to flag up its wish to pursue this with the Council by the end of this year if possible, and, if not, soon afterwards.

Q42 Rachel Maclean: We understand that it took 22 months to negotiate the previous programme of work.

Peter Haslam: This would have to be brought forward much more quickly.

Q43 Rachel Maclean: It would have to be done more quickly than previous programmes were done.

Peter Haslam: Yes.



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Q44 Chair: You explained a little bit about whether you think there are any upsides of leaving Euratom and suggested that there were not. If that is the case, what sort of relationship would you like with Euratom going forward?

Ben Russell: The goal for us and the goal for the wider industry, as I have said before, is as much as possible to replace the arrangements that were in place previously. They have worked well for 50-plus years. The closer that we can get to those, the better. It is an open question as to whether we need to move immediately to a nuclear co-operation agreement between the UK and Euratom or whether you can replace those arrangements with a series of more bespoke relationships. The net result or output of that needs to be as close to the relationship we currently have as is possible.

Q45 Chair: Switzerland and Ukraine have different forms of association agreements covering a smaller range of areas than the whole of Euratom. Is that what you mean? Do you want it to be replicated so that we do exactly the same in the UK as what happens currently with Euratom, or would you seek to have some sort of associate membership?

Ben Russell: I can only speak from our perspective; Peter and the wider industry might have some different views, but I do not think we need to move automatically to an associate membership. It is more about the output than the means. What is the way that we can produce the relationship—or something very similar to the relationship—the arrangements and the co-operation that are currently there? If that is associate membership or an NCA, okay, we should aim for that. If it is a series of smaller sector-by-sector or area-by-area arrangements, or you can do it through the export controls or a series of other arrangements, that works as well. It is a question of what the industry and Government need. Then you can look at how you deliver those.

Peter Haslam: I agree with that. It is for the Government to decide which is the best way of achieving the end objective. The objective, as Ben says, is to have the benefits that we currently have under Euratom, but, as to whether that is best achieved through a new NCA or through an association agreement, the Government need to decide which is the best approach.

Q46 Chair: It is your industries that are affected, so presumably some of the advice the Government would seek is what you need and what you would like. What would you want for the industry, Mr Haslam?

Peter Haslam: We want something that works for us. That might be achieved through an NCA with Euratom that provided something similar to the benefits that we have at the moment, but it could equally be achieved through an association agreement. We do not have a preference.

Dr Golshan: We have a very constructive arrangement currently in place with our colleagues at Euratom and we would like to see that continue,



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not least to make sure that we understand what currently takes place in the UK so that we can put in place arrangements to achieve an equivalent standard. More broadly it is for the Government to get us the outcome that the industry wants.

Q47 **Chair:** I am just a bit surprised, given that you all said earlier that you cannot see any plus sides from leaving Euratom, that you are now all saying, "We do not have to be an associate member. We could have an NCA. We could do it all here".

Dr Golshan: I did not say that. All that I am saying is that it is not really for me to determine whether association is achievable or not.

Q48 **Chair:** I have not asked you to determine that, Dr Golshan. I am asking what your preference would be. Would you like the UK to seek and form some sort of association with Euratom, or do you think it would be just as good, or even preferable, to replicate the current arrangements domestically?

Dr Golshan: I do not know what the association would entail and whether that would be the best means to achieve the closest possible relationship that we can have with Euratom. That is why it is difficult for me to say, yes, we would want to have association, or we would want status quo, full stop.

Peter Haslam: I would agree with that. We would agree with Dr Golshan that we want the closest possible relationship with Euratom. In fact, our position has been that we would prefer to stay in Euratom if that was feasible. That is what we said. If it is not feasible, we want the closest possible relationship. If the Government can tell us how that is best achieved, that is what we would want to do.

Dr Golshan: Currently, as a Euratom member, the ONR is a member of the European Nuclear Safety Regulators Group. This is a creature of the Commission that provides advice on safety matters to the Commission. By leaving Euratom, we would be losing our membership of that and it would be advantageous for us to be able to influence future policy in nuclear safety going forward. We would like to maintain as close a relationship as possible with Euratom and with the Commission in that regard.

Q49 **Chair:** The Government, though, have been quite clear that we are leaving Euratom. I understand that that is your preference, but I guess that that ship has sailed. The Government have been very clear that we are leaving, so it is now of course up the Government or Parliament to decide what that new relationship is like, but you are the people who are most affected, or representing those who are most affected. In your conversations with Government, are you encouraging them to seek some sort of association or are you, as it seems you are with us today, more agnostic about associate membership versus some sort of nuclear co-operation agreement with the European Union and Euratom?



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Ben Russell: We as a company are not particularly pushing for associate membership. It is important to note that, whatever arrangements are put in place with Euratom, that does not solve the entire question. There is the relationship with the IAEA. There are nuclear co-operation agreements to be signed, particularly for us with the US and Japan, but as Peter has mentioned there are other priority countries.

Perhaps what seems to us the simplest option would be a nuclear co-operation agreement with Euratom, because that would pick up a lot of the movement of nuclear goods and materials, and replicate some of the advantages we get from being a member of Euratom. As I say, other relationships would then need to be put in place with international bodies or other countries to answer some of the other questions.

Q50 **Chair:** Mr Russell, you talk about other issues that are very important, like NCAs with Japan, the US and others. Of course, at the moment we get those through our membership of Euratom. With associate membership, could that potentially mean that the NCAs we have with third countries would stay in place for the UK?

Ben Russell: I do not think so. I would look to others if they have different views, but the associate memberships in place are partial, so only cover certain aspects, maybe R&D or certain other matters. They are not as comprehensive as enabling you to access the NCAs with the other countries. It is only the core Euratom members.

Peter Haslam: The two associate agreements at the moment are with Switzerland and Ukraine, and they are very specific. If an association agreement was made between the UK and the EU to cover all these things, it would have to be a very different association agreement, much more wide-ranging, but it is something that would have to be negotiated.

Q51 **Chair:** When you are in discussions, Mr Haslam, with the Government Ministers—perhaps those at the Department for Exiting the European Union—what representations are you making? Are you making the representation that you want to stay in Euratom?

Peter Haslam: We are making the representation that we very much value the benefits that we have had from Euratom over the years, right across the piece and including our involvement in R&D, and that we want that to continue one way or another if we have to leave Euratom. But we have not specified what the vehicle should be for delivering that.

Dr Golshan: What I know is that it is not possible to be outside of the club, so to speak, and expect the same level of service from a regulatory perspective to be delivered. While we would like a transitional period or continuation of service, I am aware that that may not be achievable. Whether it is achievable through association membership is something that needs to be uniquely agreed, and I am not aware that continuation of the service as we receive it currently is replicated anywhere else.

Q52 **Antoinette Sandbach:** Given Austria's dislike of nuclear, is there any



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chance that it would try to veto an EU nuclear agreement?

Dr Golshan: I could not comment. I do not know.

Q53 **Peter Haslam:** I am not sure of the answer to that.

Q54 **Chair:** On transitional arrangements, Dr Golshan, you have indicated that it would be difficult by March 2019 to have in place all the arrangements for ONR to pick up the responsibilities of Euratom. Is that right?

Dr Golshan: Absolutely.

Q55 **Chair:** You would like to see some sort of transitional arrangement. Are there any benefits to having transitional arrangements that are not based on the existing Euratom regime? Would a transition period replicate what we have at the moment before we move to something else, or would transition look something different from what we have in place today? What would be your preference?

Dr Golshan: We would like to see parallel working arrangements from our perspective, but I am also very aware that the Secretary of State indicated that they do not want to see weakening of standards by the time we leave. As I said earlier, it would be unrealistic for us to sit here and say that we will be able to achieve equivalent standards. From that side, I can see that there is a significant benefit in having transitional arrangements that allow continuity of services and delivery of standards.

Q56 **Chair:** For you, Dr Golshan, in a transition period, we would maintain exactly the relationship we have with Euratom today until the point at which we are ready to leave.

Dr Golshan: Yes, and its services.

Peter Haslam: I agree. The closer that can be to what we have at the moment, the better. There would not be any point in bringing new arrangements for a short transition period and then having something else.

Q57 **Chair:** Would either of you two disagree with that?

Ben Russell: No. The only thing that I would add in terms of transitional arrangements, as well as the safeguarding, is clarity on whether any transitional arrangements that in effect prolonged membership of Euratom would also extend to the nuclear co-operation agreements.

Q58 **Chair:** For you, in extending our membership of Euratom for a transition period, it is also very important that those NCAs continue for that transition period.

Ben Russell: I would like clarity of whether that is possible.

Q59 **Chair:** How long should the transitional arrangements for leaving Euratom last? Should they replicate the transitional arrangements for leaving the EU or should they be different?



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Dr Golshan: The assumption that we have made, based on what the Prime Minister noted in her Florence speech, was that there will be a two-year period of transition. That is the only assumption that we have used in our project. If something more is possible, that would be of an advantage.

Q60 **Chair:** That would be of an advantage because it would give you more time to put in place the alternative arrangements.

Dr Golshan: Absolutely, yes.

Peter Haslam: We would agree on two years, but ideally we would like to see the transitional arrangements last until the new arrangements are in place, including the safeguards arrangements.

Andrew van der Lem: Our concern in terms of decommissioning is to minimise disruption. We are essentially saying that, under the current Euratom regime, we are using Euratom to fulfil our international obligations to the IAEA. The reason we have been very quiet about associate membership of Euratom is that we are talking about a direct application of IAEA rules, rather than doing it through Euratom. We want to keep the status quo as much as we can.

From a nuclear decommissioning point of view, stability means reduced risk, reduced transition costs, and allows us to carry on decommissioning. Stability is the key thing in all this. If that can be achieved through a quick transition, that is not a problem. For us, it is more the fact that we want to minimise unnecessary change.

Q61 **Chair:** For you, it would be more a goal-oriented transition, so we should move to a new regime when we have met a certain set of criteria rather than a specific number of months or years.

Andrew van der Lem: We have a shared planning assumption, but the important thing is the outcomes that we want to achieve from this.

Ben Russell: I agree with what was said there. Time is the key here. We do not have to invent a totally new system. It is about picking up an existing one and putting it in place, but there needs to be sufficient time to allow that transition to be made.

Q62 **Peter Kyle:** Mr Haslam, we have spoken so far purely about the regulation that we receive from the EU via Euratom. One of the key benefits, is it not, is that we can influence policymaking in the other direction. How profound a loss will it be to you and the industry when we lose that?

Peter Haslam: We would like to see the UK industry continue to have some influence in devising EU regulation. Dr Golshan referred to ENSREG and our participation in that. We would like to see the UK regulators continuing to participate.

Q63 **Peter Kyle:** You accept our influence and ability to influence will be



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diminished.

Peter Haslam: They will certainly be diminished, yes, that is true, but we would still like to have as much influence as we can.

Q64 **Peter Kyle:** The working relationship would practically feel different to you and the industry from how it was before.

Peter Haslam: We will be slightly disjointed from where we were before. We will not be in the centre of it.

Q65 **Drew Hendry:** How would you describe the Government's engagement with the nuclear industry? Has it been satisfactory? Has it met all your needs?

Peter Haslam: Industry was not consulted when the decision was taken to leave the Euratom treaties at the same time as the Brexit process, so that was disappointing to us. Since then, there was little engagement between the industry and the Government. It was quite limited for some time over the summer period and there were some reasons for that. There was a general election and other political things going on at the time. The result of that was that we were not as in touch with what the Government were doing as we would have liked to be.

Since then, the Minister, Richard Harrington, held a meeting with the industry in early September, when he brought the industry together—

Q66 **Drew Hendry:** This September?

Peter Haslam: This September—and told us about what the Government were doing in terms of Euratom. It was agreed at that meeting that there would be continued discussion between civil servants and the industry, so that we could keep in touch with developments as they occurred, and that has been happening.

We need to know more about the Government's detailed thinking and contingency planning. It is very important, if confidence in the nuclear sector is to be maintained, that we are in close contact with Government as their thinking evolves and we are taken into confidence by them. That is what we are looking for. Working with Government, we can probably achieve a better outcome than not. In particular, we have asked if we can see BEIS's timeline for meeting its various European targets, so that we can avoid the cliff-edge scenario that we have been talking about. We have not had that yet but we are hoping to get it.

Q67 **Drew Hendry:** That has not happened yet.

Peter Haslam: No.

Dr Golshan: It would be difficult for me to say what engagement the Government have had with the industry, but we are engaging with the Government, working very closely with them and advising them on various discussions that they have with IAEA and Euratom. In that sense, we are working closely.



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There is some urgency to understand better the details of the secondary legislation that, as I said earlier, gives us more clarity about the mechanisms through which we will be delivering the safeguarding regime.

Drew Hendry: Would you like to comment?

Andrew van der Lem: We are a Government agency.

Ben Russell: From our perspective, we are quite satisfied with the engagement that we have had with Government on this. There have been positive developments, including the creation of the Euratom exit unit within BEIS, which is growing. There is a very good energy and nuclear policy lead within DExEU. We have had engagement with DIT, and with the Wales Office, given where our lead development is. I would certainly echo Peter's call for more clarity around the what, how and when, but the forums and people are there to enable that to happen.

Q68 **Drew Hendry:** Mr Haslam, you mentioned that you had not been consulted. The Government have produced a paper on the impacts for the nuclear industry and Brexit, but have not published it yet. Were you consulted? I will put that to the panel, but I will start with you. Were you consulted on that paper?

Peter Haslam: I personally am not aware of that.

Dr Golshan: As I said, our discussion with the Government has been limited to providing them with advice. We have had discussions that highlight where we see the impacts on our regulation, but not specifically the impacts on the industry.

Ben Russell: I was not consulted specifically on that paper, but I am confident from the engagement that we have had with BEIS, DExEU and other departments that our issues and concerns are well understood.

Andrew van der Lem: Similarly, we are in regular contact with the Government to talk about the practicalities of the safeguarding regime. There are things that we have not really talked about in this meeting: physical equipment for safeguarding and the practical impacts of a change of regime. We are in regular contact—

Q69 **Drew Hendry:** None of you was specifically consulted on this paper. Is that fair to say? Okay.

Moving on to the skills gap and the issues that were raised earlier, how severe is the skills gap risk in the nuclear industry from leaving Euratom?

Peter Haslam: As we said earlier, the skills gap could have an impact right across the nuclear sector, but particularly on the new-build sector. It is worth saying that the industry is doing a lot to recruit and train workers in the UK. That is our ambition. Horizon and my colleague Ben are working closely with the establishments in Wales. EDF Energy in relation to Hinkley Point has invested £15 million in education, employment and skills. As we said earlier, the nuclear industry is global



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in nature and relies on drawing on skills and expertise from overseas, including from the EU.

Hinkley will be the first nuclear power station for 20-odd years and it is coming forward at the same time as a number of other major projects such as HS2 and Heathrow, so there will be a lot of pressure on the UK's own resources. We will therefore need to bring in people from Europe if we are going to successfully complete these projects. We will not have time to train other people up to do those jobs in the meantime.

As I said earlier, it is very important, whatever happens at the end of the Brexit process, that any controls that we bring in enable us to continue to mobilise those workers in the UK, to complete these vitally important projects.

Q70 Drew Hendry: Mr Russell, you mentioned earlier a specific figure for your own needs of 8,500 people, if I got that correct.

Ben Russell: For construction at peak, yes.

Q71 Drew Hendry: This is a question I would like to give to everybody. Which skills are going to be difficult to recruit? Is it more high-skilled workers? What is the mix?

Ben Russell: For us, it is probably more about the quantity. In construction, there are a large number of different roles across the sector. The issue for us is that, for a lot of those roles, whether they are steel fixers, carpenters or civil construction, the skills are going to be the same sort of skills that the other nuclear new-build programmes, but also the other large infrastructure projects, require. For us, there is a need to link the post-Brexit visa arrangements with those nationally significant infrastructure projects through some project-specific visa arrangements. If you are a designated NSIP, a nationally significant infrastructure project, there might be a carve-out or special arrangements within the visa arrangements to make sure these projects, which by their nature have been designated as strategically important, can be delivered.

Dr Golshan: It is safeguard skills in our case. That is an area that the UK as a whole and ONR specifically have had no reason to invest in because we have been a member state of Euratom. Going forward, this is an area of shortage, not just for us in ONR, but we are dealing with a limited pool of talent here.

Q72 Drew Hendry: Is there already a shortage, even if Brexit were not on the horizon?

Dr Golshan: There is, because there has been no need to invest and build resilience in this area. We have been a member state of Euratom and we have been receiving the services in terms of oversight and inspection.



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Andrew van der Lem: It is a known cross-industry issue, the projected skills gap, given all the projects that exist. We expect a 35% increase in demand for skilled workers over the next four to five years. In terms of the high-skilled areas, safeguarding is obvious, but a medium-skilled area like welding is also an example.

Q73 **Drew Hendry:** Is it safe to say that you are fearful of a skills rush in terms of your ability to recruit people, give what you have said about the other industry needs and the specific conditions that are coming up? That is going to be a real drain on the potential supply of people who are needed for the industry. Is that fair to say?

Ben Russell: Yes, we are in danger of constraining supply just at the point where demand is increasing.

Q74 **Drew Hendry:** We have covered the fact, but I just wanted to clarify, that this goes all the way across from safeguarding workers to construction. Am I correct in taking from what you have said that across the entire industry there is a skills issue and potential for a real problem?

Ben Russell: Yes. More widely than that, as I said, it is a national issue, because it is not about just nuclear or energy. It is about how the UK delivers the large pipeline of infrastructure across a number of sectors—transport, utilities, energy—where large projects need to be delivered.

Q75 **Chair:** I want to come back on the answer to an earlier question that Stephen Kerr asked. Mr van der Lem has said that there will be some impacts on nuclear decommissioning, but that you are trying to mitigate them. Sellafield has submitted written evidence to the Committee about potential severe effects, particularly on the high hazard risk reduction programme. Would any of the panel, perhaps Dr Golshan, like to add to Mr van der Lem's remarks about some of the risks of leaving Euratom on the nuclear decommissioning?

Dr Golshan: I have had a look at Sellafield's evidence. From a regulator's perspective, it is very important that we see risk and hazard reduced. I know that there are items that are long lead, so it is not like we or Sellafield decide in 12 months' time, "We have a shortage of this and it is unlikely that we are going to achieve the objective in terms of Euratom negotiations, so let us put in an order and get on with it". There is a timescale issue here and it is important that these issues are thought about and addressed.

Andrew van der Lem: Can I just clarify a couple of points? One is that I am here representing Sellafield. It is part of our group. The answer I was trying to make clear, and I hope I did, was that the situation of an abrupt cliff edge, with only the UK making unilateral efforts to mitigate it, is an extreme example. I do not want to downplay the seriousness of it, but it would lead us to take mitigating action. As Mina is saying, we would not see an impact on safety and security, and that is our primary concern.



Chair: Thank you very much, all four of you, for coming in to give evidence today.

Examination of witnesses

Witnesses: Richard Harrington MP, Katrina McLeay and David Wagstaff.

Q76 **Chair:** Thank you very much for coming to give evidence to us today, Minister, and to the civil servants and officials with you. We have just heard from different organisations: the NIA, the ONR, the NDA and Horizon. It has already been a fun-packed afternoon, and we are very pleased to have you with us now. Perhaps you and your officials could start by introducing yourselves, so we know who is here.

Richard Harrington: I am Richard Harrington. I am, in this context, Minister for Energy, but also Minister for Industrial Strategy. I am at the BEIS Department.

David Wagstaff: I am a senior civil servant at the BEIS Department, and my job is to lead Euratom international negotiations and overall strategy.

Katrina McLeay: I am also a senior civil servant in BEIS, and my role is to lead on the safeguards and delivery aspects of the Euratom programme.

Chair: Thank you very much for joining us this afternoon.

Q77 **Stephen Kerr:** There seem to be three feasible options on the table, as highlighted by stakeholders, that describe our future relationship with Euratom. One is a complete exit at the point we leave the European Union; another is a third-party association; and the third would be ongoing membership through a transitional arrangement. What is the Government's preferred option for our ongoing relationship with Euratom?

Richard Harrington: First of all, I would like to make clear that there is no such thing as an associate membership. It is an expression often used, but there is no option within Euratom where you can choose associate membership or not.

Q78 **Stephen Kerr:** How would you describe the relationship that Switzerland and Ukraine have with Euratom?

Richard Harrington: They have an association agreement on specific things. In their case, it would be research and development.

Q79 **Stephen Kerr:** There is such a thing as an associate relationship.

Richard Harrington: A relationship, yes. We are aiming for the closest possible relationship that we could have. The reason I mention this is



because the press often mention it. I must say that, when I started this job I also thought there was something called associate membership, because one reads about it so often. Obviously, we looked into it in great detail. I am not just playing with words: there is no off-the-shelf associate membership.

You are quite correct: Ukraine and Switzerland have agreements—both very good ones, by the way—on their research and development. But we are looking for a much closer association, which we hope includes all the things Euratom does. Nuclear safeguards are part of it. I thank everyone for their support in the Second Reading of the Nuclear Safeguards Bill. It is going through the Committee stage, which started yesterday. Some of the Members around this table were there. We will be continuing that tomorrow.

Q80 **Stephen Kerr:** Could you describe the functions?

Richard Harrington: Shall I go through them?

Stephen Kerr: Yes, please summarise them.

Richard Harrington: One of them is safeguards, which I have explained. The others are research and development, which we alluded to before. There are common market trade arrangements for the free movement of goods and product. There is free movement of staff, workers, et cetera, and there is the setting of safety standards through regulations and directives.

Q81 **Stephen Kerr:** That allows Euratom's involvement in ongoing safeguards.

Richard Harrington: Safeguards are separate to safety.

Stephen Kerr: Yes, of course. What about safeguards? Are they part of that list?

Richard Harrington: Yes.

Stephen Kerr: They are, so Euratom will have a continuing involvement with safeguards.

Richard Harrington: As you will be aware around this table, we have served notice to leave Euratom under Article 50. It is an old argument, but obviously if you want to discuss that I would be happy to. That is what we have done. Under the Nuclear Safeguards Bill, we are setting up a safeguards regime so that it is business as usual when we leave Euratom.

That is being done by primary legislation. As I explained, we are going through the Bill Committee at the moment, and will come back to the House in the full-on Report stage. We are doing what is necessary to do the other functions that, as I have just explained, Euratom is doing, which do not involve primary legislation but are really important.



David might like to comment on that. He is our lead negotiator.

Q82 **Stephen Kerr:** Where are we with this in terms of progress?

Richard Harrington: Do you mind if I ask David to comment on that?

David Wagstaff: I am the lead negotiator on the Brussels part of the negotiations. There are also international negotiations, which we may come on to in a moment. When we go out to Brussels, we negotiate not with Euratom itself but with what is called the Taskforce on Article 50, i.e. the people who are leading the EU-UK discussions.

At the beginning of this phase, it was agreed that it would focus solely on separation issues, i.e. those issues that need to be sorted out for day one so there is no legal uncertainty across the piece. Euratom is one part of those separation discussions; there are a whole heap of other discussions.

Both parties agreed at the outset that phase one would be about separation; phase two will be about the future. We have not yet had negotiations on the future relationship. They have not started yet. The treaty itself is a fairly substantial document. The Minister has given you the essential elements of it, but that is by no means an exhaustive list of what is in it.

Some of the separation issues have really been quite technical. If you have read the position papers that were published, you will know there are things about the ownership of special fissile material under certain different conditions, the supply agency and so on.

The only thing I would add to the list of essential elements in the treaty is the power to make nuclear co-operation agreements with third countries.

Q83 **Antoinette Sandbach:** In terms of your approach to the negotiations, bearing in mind that we have heard evidence that everybody would like to replicate the existing arrangements we have as closely as possible, it seems to me that in fact the only area of contention is the jurisdiction of the ECJ.

David Wagstaff: It depends what you mean by "contention". Because the negotiations have not started yet, we do not know what the areas of contention are going to be with the people we are negotiating with.

Q84 **Antoinette Sandbach:** If you want to replicate the existing arrangements in full as closely as possible, apart from jurisdiction—

David Wagstaff: On Second Reading, the phrase the Secretary of State used was "maximum continuity with the existing arrangements" or some phrase like that. You will obviously find it in the record. If that is our starting position, that would mean everything, as you say. The most that we can get would effectively be our starting position. Obviously, I leave it to politicians to decide which things they have particular problems with.



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Antoinette Sandbach: The Minister wants to come in.

Richard Harrington: It is very interesting. We had a Westminster Hall debate on the subject just before the summer. When the subject came up, the honourable Member for Oxford West and Abingdon, Layla Moran, stated that she had failed to find any case affecting this country on Euratom that has been in front of the ECJ in all the time it has existed. She identified this, and we have not found any. It may be a point of principle for some people, but in practice as an appellate jurisdiction it has not even been needed. I would stress what you said at the beginning of your question, which was a relationship that is as close as possible. We are very serious about this.

Q85 **Antoinette Sandbach:** Minister, does that mean that you would be willing to consider, if the European Union would consider it, jurisdiction of the ECJ in this vital area of nuclear co-operation and safeguarding?

Richard Harrington: I am sure there is a sensible solution, which may involve the ECJ and possibly other parties. I hope this is something where there will be a consensus, which can be sorted out comparatively easily. Given we will not be part of the treaty of Euratom, because we have served our Article 50 notice to leave, anything is open to negotiation. In something like this, I am sure there is a sensible solution. I hope there is in most aspects to do with the Bill. We want to do as much as we can by consensus, with everybody. This is not the most difficult thing that has to be sorted out in the whole of the Brexit negotiations.

Q86 **Antoinette Sandbach:** Would the most sensible solution be to stay in Euratom?

Richard Harrington: It is not fashionable to quote Kevin Spacey, but he said, "You may very well think that, but I could not possibly comment". To be formal about it, we have served notice on Euratom. That is an actual fact.

Antoinette Sandbach: I understand that.

Richard Harrington: Therefore, we cannot stay in Euratom, but we wish to get the closest arrangements and agreement that we possibly can.

Q87 **Antoinette Sandbach:** If there was a door that was opened that said, "You have served your notice, because technically and legally you were required to under the Article 50 requirements. There is an opportunity for you to rejoin Euratom, provided you accept ECJ jurisdiction", would that be something that you, as Minister, would consider?

Richard Harrington: It is not possible because there is no member of Euratom that is not a member of the EU, and we are not going to be a member of the EU.

Q88 **Chair:** Minister, you have also said that there is no such thing as associate membership, that what we are going to have to do will be



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bespoke, that everything is in the air and we will come to some new arrangement. Why are you ruling out us being a member of Euratom if that is possible?

Richard Harrington: I do not believe it is possible. It is in the treaty of Euratom that you have to be a member of the European Union. I am just quoting fact rather than conjecture. I would like to reiterate, Ms Reeves, that we would like to be as close to possible to the list of everything that Euratom does, so there is as much business as usual as possible from the date we leave the European Union.

Q89 **Chair:** Have you asked your opposite numbers in Europe and Euratom whether we could be a member of Euratom? Is that something you have asked?

David Wagstaff: In July, when Michel Barnier, as chief negotiator for the EU, was reporting back to the European Parliament—under its transparency rules, that was a public declaration—he pointed out that it would be impossible for the United Kingdom to continue to be part of the European Atomic Energy Community once it has withdrawn from the Union.

Richard Harrington: It is a question of fact. Having said that, if there is a way we can be as close as possible to being a member of Euratom, I would be very happy. We would all be very happy, because our objectives are the same.

Q90 **Chair:** At the beginning, Minister, you said there was no such thing as associate membership. What you are describing—i.e. a relationship that is as close as possible—would be some sort of association or associate membership.

Richard Harrington: Yes, I would describe it as a close association. We cannot use the word membership, because there is no such thing. But it is just playing with words, really. We want the closest possible association. I mentioned the membership point, because it implies to people reading about it that there is a choice of associate membership. Well, there is not, but we believe we have to negotiate the closest possible arrangements. To some extent, it is words; I accept that. But we want to get as close to business as usual as we possibly can.

The reason we are doing the Nuclear Safeguards Bill—I am not sure everyone is aware—is because we have to set up an alternative arrangement to safeguarding if we cannot negotiate with Euratom to continue with safeguarding. Most people accept that is something we have to do.

Q91 **Stephen Kerr:** Is the Bill plan B then? I am inferring from what you just said that the Bill that you have presented, the Nuclear Safeguards Bill, is actually plan B. Plan A would be to continue to have safeguarding in the context of Euratom.



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Richard Harrington: We made that very clear at the Second Reading of the Bill. We have to make sure we have a safeguarding regime in place and we have chosen to do that, in the absence of an agreement with Euratom, by having it under the umbrella of the ONR. Most people will accept that is a sensible thing to do.

We want a regulatory regime for safeguards with inspectors, cameras, recording information, together with the IT platform and everything. Yes, yours is a fair description of it. Whether it is plan A or plan B does not really matter. It is making sure we have a safeguards regime in place. It is on the list of things we want to negotiate with Euratom.

I would like to point out that we have not started the substantive negotiations yet, because of the general EU issue; it is not because of lack of will. In case we cannot negotiate a suitable safeguards regime, we have to make sure that we have one. Would you mind if Katrina comments on that?

Katrina McLeay: The Minister put it very well, but the safeguards regime underpins most of what the nuclear industry does, as I am sure you all know. The framework of nuclear co-operation agreements that we have with key third countries also enables movement of special fissile material between countries.

Given that we do not know the timings of future negotiations with Euratom about what this future association agreement would look like, it is prudent to put in place all the plans we need to allow as much lead-in time as we can. When we are no longer a member state, we have to ensure we have a safeguards regime in place that enables our industry to continue its activities and allows us to continue to discharge our international commitments on safeguards and non-proliferation.

Q92 **Stephen Kerr:** I have one last question to the Minister. Can you help me with the form of words? You said we were playing with words earlier. Just for clarity, what is the form of words you would prefer us to understand is the Government's preferred option?

Richard Harrington: The Government want us to have a close association that replicates the different functions we have gone through.

Katrina McLeay: It was your middle option when you outlined the three.

Q93 **Chair:** To be clear, is there anything about our relationship with Euratom at all that you would like to change?

Richard Harrington: No. As far as I am concerned, the different headings seem to work very well. We have a very well respected regime. But we can replicate the safeguarding thing with our own Act of Parliament. We have a Bill, hopefully to become an Act of Parliament. We can replicate the other ones—the different roles I went through at the beginning of Mr Kerr's question—with sensible negotiations. Up until now, our negotiations have been with the Commission. They are



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pre-negotiations. We have no reason to believe that the European Union would have big objections to this. We cannot tell, because we do not know.

Q94 **Chair:** There is nothing wrong with what we have today. That is why you want it to be as close as possible.

Richard Harrington: Yes, that is fair to say.

David Wagstaff: The way in which the EU 27 side is proceeding is to try to pin down all the things that are being pulled apart before we then get to the conversation about how much we can put back together again, which is a slightly frustrating process, as you can imagine. Its reason for doing that is: "We cannot assume that we know what the future relationship is going to be like with the United Kingdom. Therefore, we have to prepare for the eventuality of there not being such a relationship. Therefore, we need legal certainty on the separation issues. The sooner we can get that legal certainty on the separation issues, the sooner we can start building the relationship". As I say, since that has not started, it would be pretty speculative to talk about how that is going to go.

Chair: I am sure they feel some degree of frustration, too.

Q95 **Peter Kyle:** Thank you, Minister. The Swiss Ambassador recently gave evidence to a Lords Committee, in which he said it was very difficult for non-members of Euratom to influence policymaking within the Euratom group. In fact, his words were, to quote, that they have "no say" on decision-making at all. Do you accept that the future relationship we have with Euratom once we leave is going to be at a cost to our ability to influence policymaking within Europe?

Richard Harrington: I cannot answer that question, simply because we do not know how things will turn out. As far as the treaty is concerned, it is the members of Euratom that have the decision-making powers. I followed the Swiss Ambassador to that Lords Select Committee, and the same point was brought up. Switzerland's is quite narrow.

Q96 **Peter Kyle:** Are you seriously suggesting that we can have the same influence outside of Euratom as we do inside, bearing in mind that Ofgem is the organisation driving a lot of the policymaking that is being done there?

Richard Harrington: I am seriously suggesting that the negotiations have not yet started properly, for the reasons we have explained. While we cannot have, as we have now, a formal position within Euratom, because we are members of Euratom, the arrangements with Euratom are open to us. We can have whatever is agreed between us.

Q97 **Peter Kyle:** Let me word it this way, then. Can you point to a single industry expert who believes we will have the same influence outside Euratom as we do in, bearing in mind that the four previous witnesses we had, some of whom are still in the room, all said that our influence will be



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significantly diminished outside?

Richard Harrington: It depends what is negotiated, but I will accept, Mr Kyle—anyone would accept this: it is part of the whole Brexit argument for those of us on different sides of the argument—that when you are outside the European Union—

Q98 **Peter Kyle:** Can you point to a single industry figure who believes we will have the same influence outside as inside?

Richard Harrington: No, I cannot, but we have not started the negotiation yet. I accept your point: to have a full say on everything, you have to be a member of Euratom. I accept that point.

Peter Kyle: You have made your point.

Richard Harrington: And you have, very well.

Q99 **Peter Kyle:** What benefits has the influence we as a country have had inside Euratom delivered for our country?

Richard Harrington: David, perhaps you would care to comment on that, because you are involved with Euratom on a day-to-day basis.

David Wagstaff: Since the UK joined the EU and joined Euratom at the same time, the whole of the nuclear industry has been working on this basis of all 28 member states—including the non-nuclear member states and the nuclear member states—working together in this common community called Euratom. It has all the different provisions that were listed out earlier, some of which replicate or have been subsumed under broader EU ones. There is something called a nuclear common market in the Euratom treaty. You do not hear people talking about a nuclear common market, because it was obviously overtaken by the wider EU common market.

It is clearly the case—the Secretary of State and the Minister could not have been clearer at the Second Reading—that Euratom has served the UK well.

Q100 **Peter Kyle:** It has been a benefit. That kind of influence is a benefit we are likely to lose.

David Wagstaff: The answer that it has served us well does not necessarily mean are going to lose it.

Q101 **Peter Kyle:** Influence on the scale we have had is a benefit we are likely to lose.

David Wagstaff: The reason that the Government are trying to keep as close an association as possible is clearly because of the risk of losing some of the benefits. That is true, yes.

Q102 **Peter Kyle:** But your negotiating stance is, “We try to negotiate a relationship as similar as possible”. No one has come here and said you are going to try to negotiate for more influence than we have had before.



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The maximum we can possibly hope for in these negotiations is to be as similar as possible. By likelihood, if our negotiating stance is, "We are going to try to get as much as we can", we are not going to have exactly the same influence as before. Can we just agree that? It is so blindingly obvious, and it is important.

David Wagstaff: I am not sure. If you are asking whether we are going to tell the European Union that we are simultaneously leaving Euratom and we want more influence over Euratom, no, we are not going to do that.

Q103 **Peter Kyle:** Exactly, yes. Minister, do you not cringe every time you hear David Davis say that we will have exactly the same benefits outside membership as we will have in?

Richard Harrington: Mr Kyle, I am not a cringer by nature. I have done a lot of negotiations in my time—nothing to do with Euratom before—and I do not prejudge them. With goodwill on their side and goodwill on our side, we can negotiate a really close relationship. I would like to say that because of our excellence in this field, in practice we will have as much influence as we have now.

Q104 **Peter Kyle:** You will be a laughing stock to experts out there if you believe you can leave membership and keep all the benefits of membership outside. The key benefit we have is feeding in and influencing, as well as benefiting from the costs of regulation.

Richard Harrington: In fairness, no one has done this before in the way we are trying to do it now.

Q105 **Peter Kyle:** Why have you shut so many doors in your negotiating stance? You have already ruled out remaining in Euratom.

Richard Harrington: We have served notice to leave Euratom.

Peter Kyle: You did that without consulting the industry first.

Richard Harrington: Well, it was done as part of the Article 50 process, as we know. Given that we have to accept the fact that we have served Article 50 notice and will be leaving on the date we are leaving the European Union—I accept that there are different arguments and everything about it, and I am happy to discuss it if you like—our policy is to have the closest possible relationship with Euratom.

Peter Kyle: But we will not have the same relationship.

Richard Harrington: If I could just finish, you are trying to put things on the record and so am I, so we make sure we perfectly understand each other. Our aim is to have the closest possible relationship. I accept that we will not be a member of Euratom. We will not be part of that treaty in the way we are now, but that does not mean we cannot have a really good series of bilateral relationships with Europe.

Q106 **Peter Kyle:** Let us wrap this up, then. Will we have exactly the same



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benefits outside of Euratom as we have inside Euratom?

Richard Harrington: We will have to wait and see. It is my job to try to make sure that we can.

Q107 **Chair:** Does the two-year transition period the Prime Minister has spoken about in terms of our departure from the EU also apply to Euratom?

Richard Harrington: We are waiting to find out on that. The Prime Minister has stated her intention, which would include Euratom. Obviously we have to negotiate that with the European Union.

Q108 **Chair:** When the Prime Minister said she wanted a two-year transition in our departure from the EU, that applied to Euratom as well.

Richard Harrington: That will become clear in what the European Union wants from us.

Q109 **Chair:** Is that the Government's intention?

Richard Harrington: Yes, the Government's intention is to have that. I am trying to plan, as I am trying to do with the Nuclear Safeguards Bill, so that we have a regime in place on the day, because the European Union may turn around and say it does not want a transition period.

Q110 **Chair:** Yes, I am just asking what the Government's negotiating position is. Do the transition arrangements for leaving Euratom need to be tied to those for leaving the EU or could you have a different transition period for leaving Euratom and leaving the European Union?

David Wagstaff: The Prime Minister's Florence speech was quite clear that the transition or implementation period that was being talked about comes after the departure in March 2019. The Article 50 trigger that covers both the EU and Euratom happens.

Q111 **Chair:** Yes, I understand all this. After March 2019, the Prime Minister wants a two-year transition or implementation period for our departure from the EU. The Minister has already confirmed that it also applies for Euratom. My next question is this: does it need to be tied exactly? The Prime Minister has said two years for implementation or transition. Minister, does it need to be the same for Euratom and the EU? Could you have a difference? Could you have 18 months for one and two and a half years for the other, for example?

Richard Harrington: It is all for negotiation.

Q112 **Chair:** The Prime Minister has been clear that she wants two years for leaving the EU. I am not asking about what is negotiated; I am asking about what we are going in and asking for.

Richard Harrington: It would seem very sensible that the two would lie together, because the two Article 50 notices were sent together. It seems sensible that that is the case. I would like to make clear that, as far as the Nuclear Safeguards Bill is concerned, which is the core Euratom



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point—I know there are other ones, as we discussed before—it is our intention, transition period or not, to have a suitable regime in place by the time we leave the European Union.

Q113 **Chair:** In the evidence session we had before you joined us, Minister, stakeholders expressed concern that a two-year transition period might not be long enough to implement new safeguards and trade arrangements. Would you therefore allow an implementation period for our departure from Euratom that would be longer than two years?

Richard Harrington: It would not be in my power, because it depends on what the European Union wants as well. There are two to a negotiation.

Q114 **Chair:** I understand all that. I recognise that you cannot answer for the EU, Minister. I am asking about what your intention is, whether that is something you would seek.

Richard Harrington: I do not think we will need that. I was not present at the evidence session before, but I would hope that we can have everything in place before the transition period begins. As far as the transition period is concerned, it would make a lot of sense to fit it into the general transition period for exiting the European Union, i.e. we exit and there are two years after that for transitional arrangements to take place.

On other occasions, I may have met privately with the experts who have given evidence to you today, and I am aware of that position. But they do not really know and we do not really know. It depends how quickly we can get on with things.

Q115 **Chair:** I understand all that. You used the expression that you “hope” we will be able to do it within two years. I hope I am going to win the national lottery on Saturday, but I am not planning on it. Minister, the Office for Nuclear Regulation says it will struggle with a two-year transition and that a longer transition or implementation period would be useful. You are the Minister responsible for this, and you have a lot of knowledge in the area, but the Office for Nuclear Regulation probably has a tiny bit more additional knowledge and expertise. It is saying that longer than two years would be really helpful to make sure we do not fall behind in terms of safeguarding.

By its very nature, this is an industry where safeguarding is incredibly important. If it needed more than two years, would you go to Euratom and the European Commission and say, “We can have two years for the EU, but we need two and a half or three years for this”. Is that something you would be willing to go in and argue for?

Richard Harrington: Ms Reeves, you mentioned the lottery. Whether you win the lottery or not on Saturday is nothing to do with anything you or anybody else can influence. I am making a serious point. I know you



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meant it in humour, but this is not a chance thing. We have the ability to influence this and how quickly it happens.

Q116 **Chair:** The reason I used it, Minister, was because you said you hoped you would have these arrangements in place. There are lots of things we hope for, but certainty and clarity in an area like nuclear regulation are really important.

Richard Harrington: That is a very valid point. Camelot being in my constituency, I watch the lottery regularly. By the expression "I hope", I meant that is what we are trying to do. What the industry needs is certainty. I have been at other evidence sessions with you before where people have commented on that. Whether or not a transition period is negotiated, we hope to be able to give them that certainty as soon as possible.

For the moment, we continue with the Nuclear Safeguards Bill, with a plan that there is a suitable safeguards regime in place by when we leave Europe, and all the other matters are dealt with on a bilateral basis. We are dealing with third-party countries now as quickly as we can, and there is good progress on that. The matters with the European Union, with the actual Euratom negotiations, we hope to start as soon as possible.

Q117 **Chair:** Can I come back for a moment, Minister? It was the ONR that said it did not think it could be ready by March 2019 and that a transition period of more than two years would help ensure we could set up the safeguarding regime we need in an area as sensitive as nuclear. We all supported the Nuclear Safeguards Bill because we recognised that we needed a plan B, if we could not have as close a relationship with Euratom as you are setting out to achieve, Minister. If even the ONR is saying it might need more than two years after March 2019, getting Royal Assent for the Bill is not going to mean that it is ready when you need it. That is why I am asking whether you would go in and seek more time to make that transition work.

Richard Harrington: We will certainly be speaking to the ONR, as we do on a regular basis, about it. I would like to make it clear that the Royal Assent bit is not the most important thing. We are starting work now.

Q118 **Chair:** It is starting work now, yet it is still saying that it thinks more than two years would be helpful. The exact point I am making is that Royal Assent in some ways is neither here nor there.

Richard Harrington: I agree.

Chair: It is about whether it is able to recruit and train the people to do this work. I am just asking one last time whether you would go into these negotiations and be perhaps a little more flexible about what implementation period you would need on Euratom, which might be distinct from the EU as a whole.



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Katrina McLeay: You have heard from the ONR witnesses. We have been working with them very closely. We know they are undertaking various strands of work to ensure that a safeguards regime in the UK that meets international standards is ready on the day of exit. We know that is a challenging task for them, and we are in constant contact with them about it.

We would want to continue to have discussions with them about what they might require from a transitional period, and we would want to feed that in to the broader negotiations the UK was having generally over transition.

Richard Harrington: That is exactly what I would have said. We are not doing this blindly; we are not oblivious to comments from the ONR or from anybody else. In fact, I hope the department has been very open in asking people for comments both publically and privately. We have made great strides up to now, and it is our job to make sure we and the ONR have the resources to get the job done as soon as we possibly can.

Q119 **Antoinette Sandbach:** I just wanted to come in on your preparedness for 2019, because it is quite clear—and this is the evidence we have had—that nuclear non-co-operation agreements, and effectively all the items dealing with Euratom, would need to be in place before the start of the Austrian Presidency, i.e. by the end of March 2018.

Bear in mind you have not even started the negotiations yet, because you are dealing with separation and not your new relationship, and Austria has quite clearly indicated that it may veto any arrangements, because it does not want to deal with Euratom issues at all during its Presidency. The reality is, is it not, that March 2019 is not your deadline? Your deadline is March 2018.

David Wagstaff: We might need to check the correct phrase, because you may have accidentally said “non-co-operation agreements”, which I am sure you did not mean to say.

Antoinette Sandbach: I am sorry: nuclear co-operation agreements.

David Wagstaff: There are nuclear co-operation agreements in place at the moment between the EU, which obviously the UK is party to, and various different third countries.

Antoinette Sandbach: Yes, I understand that.

David Wagstaff: I am not sure whether you are asking about the UK’s new nuclear co-operation agreements with those third countries, which do not rest on Austria or anyone else’s view of them, as they are between the UK and the third country, or about whether we are going to have a new nuclear co-operation agreement with the EU itself.

Antoinette Sandbach: There are two things

Richard Harrington: We will try to answer them both.



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Q120 Antoinette Sandbach: If you are trying to be as close as possible and have a different but negotiated arrangement with Euratom, in which presumably part of your negotiations may be that you can access the nuclear co-operation agreements that are currently in place in Euratom, so that you do not need to do at least a minimum of four different nuclear co-operation agreements with other countries, that would all need to be done, agreed and delivered before the Austrian Presidency.

David Wagstaff: In that case, the answer is quite straightforward. We are far further progressed on those negotiations with the four countries than we are in our negotiations with the EU, so it is the wrong way round, or it is the right way round, from the UK's point of view. We have drafts that are being discussed line by line with Governments now. We will be able to put in place nuclear co-operation agreements bilaterally between the UK and those other countries. They need to be ratified by those other countries, so I cannot give a 100% guarantee, because obviously it is up to those countries. But we understand the processes; they understand their processes; and the timetables are built in.

The good news is that it is not a requirement for nuclear trade to have a nuclear co-operation agreement with the EU. It is a requirement for nuclear trade to have one with the particular countries we mentioned in our written memorandum: USA, Canada, Japan and Australia. That is why we have prioritised those. Rather than worrying that we have not even started, the good news is that we have almost completed those discussions. We will then attempt to get as much as we possibly can out of the discussions with the EU, safe in the knowledge, a bit like with the Nuclear Safeguards Bill, that we have the safety net we need to ensure the continuity.

Q121 Antoinette Sandbach: You are confident that ratification could take place if there is a breakdown or you are unable to agree.

David Wagstaff: Our timetable allows for those ratification processes.

Antoinette Sandbach: Ratification cannot take place before you have left Euratom, can it?

David Wagstaff: Do you mean ratification by the third countries?

Antoinette Sandbach: Yes.

David Wagstaff: They can put them in front of their Parliaments and discuss them as new draft agreements, and they can come into force when we are no longer a member state.

Q122 Antoinette Sandbach: Have you set an exit day, then?

David Wagstaff: I have not set an exit day, but Parliament has set an exit day: 30 March 2019.

Antoinette Sandbach: There is dispute about that. I am not sure it has, yet.



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Richard Harrington: We are working on the assumption that it is the exit date that everybody thinks. We have no choice but to do that. We have to work on a working assumption.

Q123 **Rachel Maclean:** Minister, our departure from the EU and Euratom presents many challenges for civil nuclear, not just safeguards. We recognise that the Bill is going through. Why have you published a position paper only on safeguards and not some of the other challenges we heard from our previous witnesses in the session?

Richard Harrington: Safeguards are the thing we have to have primary legislation for. That is why we have prioritised safeguards. As far as the other matters are concerned, we have published our position papers.

Q124 **Rachel Maclean:** We have no information about any other position papers on, for example, skills—we have heard from the previous witnesses before the Committee about how that will be affected—or the overall impact of Brexit on the civil nuclear sector. We understand there is a paper, but it has not been published yet. When can we expect to see those from the Government?

Richard Harrington: We will be publishing the impact assessment very soon. It is just going through the procedure. It will be very, very soon.

Rachel Maclean: Can we have any date on that?

Richard Harrington: I can say “very soon”.

Chair: We heard that about the clean growth strategy for about a year and a half. We will take you at your word, Minister, that “very soon” means “very soon”.

Richard Harrington: It will be much more soon than the Chair’s example of the clean growth strategy.

Chair: It will not be that sort of “very soon”, but a real “very soon”.

Q125 **Rachel Maclean:** Given the Minister has been so generous as to make the commitment to publishing that, we have also heard that you have given no specific assurances as to how you will continue the R&D funding for the JET project in Culham. We understand that undertakings have been made in a general sense, but no specific timeline has been given for that. Could we have some assurances that that will be done very soon?

Richard Harrington: What you are saying is not quite correct, Ms Maclean. At the moment, we have basically mirrored the EU’s commitment on funding. It is not like there is a further agreement the EU has, which we have said we are not going to cover. In fact, the Secretary of State said it would be a mirror to take away any feeling that, when we leave the European Union, suddenly everything will stop. The new funding after that, just the same as it would be, were we in the EU, will go through the normal business case and all the things that Government do. It would be unreasonable at this stage for us to go further without having all the procedures in place, the business case and



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all the arguments, which are very normal. There is no reason to suggest anything different.

This is an excellent project. We do not want to jump ahead of it, because there is no reason for us to do so, so we have undertaken that we will mirror the EU's funding, although technically we will have left the EU by then.

Q126 Mark Pawsey: Minister, as we leave Euratom, what role is there for the International Atomic Energy Agency? Where would it fit in?

Richard Harrington: Obviously, we have arrangements with the IAEA now, generally through Euratom, and we continue to have those. We are negotiating bilateral arrangements, which have to be ratified by the board of the IAEA, which is continuing. Katrina, I do not know whether you would like to comment on that.

Katrina McLeay: In terms of the role of the International Atomic Energy Agency on safeguards, the UK has made a voluntary offer of what it will do in terms of safeguards. There is a trilateral agreement between the UK, Euratom and the IAEA currently. When we leave Euratom and we are no longer a member state, we will need to have a bilateral agreement, a bilateral voluntary offer, with the IAEA, which covers what we have offered to do in terms of safeguarding nuclear material in UK territory. This feeds into the nuclear co-operation discussion as well. The negotiations on that new agreement are already in train, because that is something our nuclear co-operation agreement partners want to see.

Q127 Mark Pawsey: Will that agreement be ready and in place when we leave Euratom in March 2019?

Katrina McLeay: Yes, it will.

Mark Pawsey: You have every confidence in that.

Katrina McLeay: Yes.

Q128 Mark Pawsey: Sellafield has told us it is concerned that there might be two safeguards regimes operating simultaneously, as we move between the two. Do you recognise the concern that there may be two regimes operating simultaneously? Do you see that at all?

Katrina McLeay: It would not be possible to have two operating simultaneously. The IAEA would expect to see one or the other.

Mark Pawsey: Which one would take precedence, if there were two in existence?

Richard Harrington: We would just make sure there were not two. It would be absurd for there to be two. The IAEA would want one, and so would we.

Q129 Mark Pawsey: Okay, but when would it take effect? It might be in



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existence and it might be prepared ahead of leaving Euratom in March 2019. Minister, you have told us there is absolutely no possibility of the Euratom safeguards existing beyond that date.

Richard Harrington: No, I did not say that. I said there would be no possibility of running two together. If you are referring to when we were talking about leaving Euratom, there could be no safeguards if there was no agreement, and that is why we are setting this up.

Q130 **Mark Pawsey:** Minister, you have told us that you would like the Euratom arrangements to be replaced in the best possible way. Do we see the IAEA agreement as being like the WTO position in terms of our trade discussions? Is it a fallback that we may not need to rely on but could rely on?

Katrina McLeay: We will need a new voluntary offer with the IAEA in all situations. What the form of it is could reflect any potential new agreements that we have with Euratom as a result of negotiations. There would not be two safeguards regimes. There would either be a UK-operated safeguards regime or a new Euratom-based safeguards regime.

Q131 **Mark Pawsey:** The concerns that Sellafield has made us aware of, as a Committee, are misplaced.

Richard Harrington: We could not have two safeguard regimes. We would make sure that did not happen. We cannot be precise as to which, because we do not know how the negotiations will go.

Q132 **Mark Pawsey:** Sellafield was concerned about the costs of running with two regimes. You are telling us that those concerns are not going to materialise; two regimes will not exist.

David Wagstaff: At the moment, there is one regime, but it involves Euratom inspectors and IAEA inspectors, and it has the support of the ONR in a secondary role already. There is already a regime that has more than one player in it. It works perfectly well. We did not hear those concerns, and we will try to find out what is behind them. The system at the moment has multiple parties.

Chair: It was the written evidence that was given to this Committee, which you should have access to.

Q133 **Mark Pawsey:** Perhaps we could pass that to you. You told us you are talking to third-party countries about new nuclear co-operation agreements. Those of course cannot be ratified until such time as we have left the EU. Perhaps you could give us a bit of information on the timetable for drafting and agreeing. Do we expect them to be agreed in March 2019 once the Article 50 process is concluded and we then move into a transition phase? Can we enter into agreements at that stage? Will they be ready to go at that stage?



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David Wagstaff: I am sorry. Could you say that again? I missed the beginning.

Mark Pawsey: These are discussions and talks with third-party countries on nuclear co-operation agreements. You told us the discussions were already taking place.

David Wagstaff: That is correct.

Mark Pawsey: I am just looking to ask whether or not they are going to be ready for the March 2019 deadline.

David Wagstaff: Yes. The timetable we are working to takes into account the ratification periods required by those other countries. Assuming they can get things through their processes in the times they would hope to be able to do so—as I said before, I cannot give a 100% guarantee they will be able to do that, because these are foreign countries and these are their processes—the timetables allow for these things to be ready for day one in the event that there is no transition period.

Q134 **Mark Pawsey:** You would expect us to be in a position to ratify them on the date the Article 50 period comes to an end. We would simply ratify those in March 2019.

David Wagstaff: I am not sure exactly how the parliamentary process works in terms of you ratifying ahead of it coming into effect.

Mark Pawsey: Clearly, we want to avoid gaps and cliff faces.

David Wagstaff: Yes. I meant that it could be in advance of that. It will not be any later than that, but it may well be able to come before Parliament in advance of that as a draft for you to look at.

Q135 **Chair:** Other countries have taken years to agree nuclear co-operation agreements. As you say, Mr Wagstaff, it relies on other jurisdictions ratifying these things. You have very little say over what the US Congress does, for example. You seem very confident that this is all going to be in place, but it would be good to understand where that confidence comes from, because I would imagine this is something that is very uncertain.

David Wagstaff: I have been in the discussions—I lead the team that does the international negotiations as well as the EU negotiations—with the Canadian Government, the Japanese Government, the American Government and the Australian Government. I have to say these are more like discussions than negotiations. It is not a sort of “winner and loser” battle. We both want the same thing.

What we want is the certainty that comes from having a co-operation agreement that effectively reproduces the relationship we already have by virtue of our membership of Euratom. The reason I am confident is that it is not in anyone’s interest to be unsuccessful in that. It is completely in both parties’ interests to be successful in it. That is why we



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have made such rapid progress. You are right: this progress is more rapid than has previously been the case with international nuclear co-operation agreements, but that is because we know the clock is ticking and we want to get on with it.

Q136 **Chair:** Minister, you are pretty certain that those arrangements with Australia, Japan, the United States and Canada will be in place for the moment they are needed.

Richard Harrington: We are very well advanced in our negotiations with those four countries. I have every reason to believe they will be in place.

Q137 **Mark Pawsey:** I have one final thing, which is a practical consequence of leaving Euratom. There are Euratom-owned assets within the UK. I understand some of them are at Sellafield. What plan do the Government have to remove and replace the Euratom-owned equipment?

Richard Harrington: Mr Pawsey, I would hope that a commercial arrangement can be made whereby we acquire them. Otherwise, technically, they would have to be removed and replaced. There is a common desire to have the proper safeguards in place. This is down to a commercial negotiation. Obviously, as, I hope, a diligent guardian of the public purse, we would buy them as cheaply as we can. That is just a straight commercial negotiation.

Q138 **Mark Pawsey:** What estimate do you have of the value of the Euratom assets that would need to be acquired as we conclude those negotiations?

David Wagstaff: It is a matter of record in both the EU's position paper and the UK's position paper that ownership of existing Euratom safeguards material on UK territory is part of the separation negotiations. It is literally ongoing in the negotiations, and it would be pretty difficult to talk about the value the UK side puts on it during the negotiations.

Q139 **Mark Pawsey:** Sellafield has told us that the cost of removal and replacement on its side amounts to upwards of £170 million. Minister, is that a price worth paying to leave Euratom?

Richard Harrington: It would be prudent of me to say that we will have to wait for the negotiations on that. I have not heard that number or anything like it.

Q140 **Antoinette Sandbach:** I want to come back to the Austria issue. I am really quite concerned, because at the end you are going to need approval. The evidence from the ONR has been that it will not be able to replicate Euratom-equivalent safeguards across all nine areas that the current Euratom treaty covers by March 2019. That is the evidence to this Committee and to the House of Lords Committee. Minister, what is your assessment of the risk that you may miss the commitment you have made to this Committee in your written evidence that withdrawal from Euratom will not result in a weakening of our future safeguards standards?



Richard Harrington: Are you referring to the safeguards bit of Euratom?

Antoinette Sandbach: I am referring to all of it, really.

Richard Harrington: We are covering the safeguards bit in our Bill. I accept the Chair's very valid point that Royal Assent does not make any difference, but, given that we have already started, it is our intention that there is a very suitable safeguards regime in place by the time we leave the European Union.

Q141 **Antoinette Sandbach:** I understand that, but there are nine different chapters in the Euratom treaty, nine different aspects that need to be covered.

Richard Harrington: You mean things other than safeguards.

Antoinette Sandbach: Yes.

Richard Harrington: We hope to negotiate and we are negotiating, as soon as we can, with Euratom and the European Union the other areas that Euratom covers. We have a clear programme in place for the safeguards regime, because we have our Bill coming through. We hope to negotiate the others. We will be negotiating them.

Q142 **Antoinette Sandbach:** You accept that the deadline, for all practical purposes, requires that negotiation to be signed and sealed before the Austrian Presidency.

David Wagstaff: May I make what might sound like a technical point, which has quite important implications, to answer that question? There are two different articles in the treaty that deal with the relationship between Euratom and third countries. One of them is Article 101, which enables the community to enter into agreements with third states. That is the one that has been used in the research and training context with Switzerland. That requires a qualified majority vote.

The other one is Article 206, which enables the community to conclude an agreement establishing a formal association involving reciprocal rights and obligations. That is the "association with" part, not being an associate member. That requires unanimity. It sounds technical, but the point is that the position of Austria or indeed any other member state will make a lot of difference under a unanimous article than under a qualified majority voting article.

Q143 **Antoinette Sandbach:** The voting process is only likely to happen at the end. As the Chair has suggested, are you dealing with this as two separate negotiations? There is the negotiation in relation to the EU in relation to trade, but because Euratom is a separate body—and for a long time, up until the Lisbon treaty, was a separate body in terms of the EU—are you dealing with those as two separate negotiations? Actually, the Euratom aspects of the negotiation could go to the European Parliament before the Austrian Presidency starts.



Richard Harrington: I would like to make it clear that the negotiations are still to come.

Antoinette Sandbach: The answer is you do not know.

Richard Harrington: How we deal with them is what actually happens at the time. As everyone is, we are waiting to start the next phase of negotiations with the European Union.

Antoinette Sandbach: I am sorry to interrupt you. Even assuming that we make progress in December, is four months or so sufficient for you to conclude all the matters you have to negotiate? No, it will be 14 months, will it not?

Richard Harrington: No, four months certainly would not be, but with 14 months I am optimistic.

Q144 **Antoinette Sandbach:** Can I move on, then? Mr Wagstaff, you spoke about R&D. At the moment, we are the world leaders in research on the JET project. It is potentially worth £1 billion in contracts for the UK. Again, how do you anticipate Austria's Presidency in July 2018 affecting the JET contracts' needs, in particular given that the UK has agreed to underwrite its share of JET contract costs post leaving the EU?

David Wagstaff: I must admit I do not feel entirely comfortable singling out one member state as the fly in the ointment. There is quite a balance across all 28 member states of pro, anti and ambivalent towards nuclear, and it is not as straightforward as for or against nuclear. The projects you have just mentioned are nuclear fusion, and it is possible—Austria may even be in this position—to be quite enthusiastic about the prospects of nuclear fusion while still not particularly supporting nuclear fission.

Q145 **Antoinette Sandbach:** I will accept your limitation on pro or anti-nuclear, but we will use that as a general thing. What issues do you see around JET? The Government have said, "We will underwrite it", but that does not guarantee that we will continue to get the co-operation or contracts.

David Wagstaff: There are precedents. This is the one area where there are precedents, as we have touched on already, with Switzerland and with Ukraine. That co-operation can take place, because we have already seen it take place. The UK is very confident.

The very fact we have this world-leading reputation and this flagship project makes us all the more confident that we will be able to come to a positive arrangement with the EU, and that is with all member states. I should also say, in my caveat about what we mean by "pro-nuclear", that even member states that are not particular supporters of nuclear power are certainly supporters of nuclear decommissioning. There is still a lot of important research around the management of nuclear waste and the safe management of our nuclear legacy.



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We are confident that the European Union will wish the UK to continue to participate in its R&D programmes, and we know that that can be done because other countries are already doing it.

Q146 Antoinette Sandbach: Are you preparing to make UK citizens and UK business aware of the UK Government's stance on ongoing Euratom R&D collaboration, i.e. your priority areas for ongoing R&D collaboration? You have indicated decommissioning as well as the JET project, but I presume there are other collaborative projects. Are you going to make that clear?

David Wagstaff: You make an important point—thank you for reminding me—which I was going to try to draw out. There are certain aspects of this debate that go much more widely than just nuclear. There is the wider research and development programme, which is a multi-million pound programme across all sorts of areas.

Antoinette Sandbach: Yes, but I am talking about Euratom R&D.

David Wagstaff: Sure, but those discussions need to be had across the piece, just as the discussions about movement of nuclear workers need to be had as part of a wider conversation about the movement of workers. The movement of trade and customs needs to be—

Q147 Antoinette Sandbach: I am sorry to interrupt you. You are not taking a sectoral approach, then.

David Wagstaff: I personally am responsible for the Euratom and nuclear bit, so, yes, I push, in the way one would expect, the nuclear interests within Government, just as this department, BEIS, pushes business interests across Government. I am saying it is unlikely that I will be able to determine the outcome, because it is a much bigger issue for the whole of Government.

Richard Harrington: If I could clarify from our point of view, it is our job to make sure, first of all, that DExEU is fully aware in its general negotiations with the European Union of all the things we have spoken about: skilled workers and materials, when it comes to the free movement of goods. When we start the negotiations—not the ones we have had up until now but the actual substantive ones—with Euratom, it is our job to make sure this is dealt with separately. BEIS, our department, is doing it at official and ministerial levels on both fronts. Well, we are doing it on one front at the moment with DExEU, and we will be doing it on both, as soon as we start the substantive negotiations, with Euratom. It is very important, and we are very aware of it.

Q148 Antoinette Sandbach: JET R&D is going to be a priority for you, in particular our expertise and our ongoing relationship with Euratom, in order to ensure that those R&D relationships can continue.

Richard Harrington: It is one of the important points

Q149 Drew Hendry: Minister, you have just mentioned skilled workers. The ONR has said that the clearest risk to not establishing an IAEA-compliant



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safeguards regime by March 2019 is the ability to recruit. How will the Government provide certainty that the ONR has the resources and ability to recruit sufficient staff to meet its new safeguarding functions on time?

Richard Harrington: The recruitment process has already been started by the ONR, as has the commissioning of the IT project et cetera. The number of inspectors who need recruiting is not in the hundreds; it is in the tens. 15 was mentioned at a previous Committee to which I gave evidence. It is our intention and the ONR's intention to make sure it has done that in time. That is why we are starting now.

Q150 **Drew Hendry:** How would you guarantee that? That was the question.

Richard Harrington: Nothing can be guaranteed, but it is our intention. There is a recruitment programme, and we are aware of the significance of it. We talk to the ONR on a very regular basis about it. We are certainly not prepared to wait until a few weeks before the end. It is recruiting either existing suitably qualified people, who have perhaps been doing the job before or something similar, or people who have a part-qualification who can be trained to do it.

Q151 **Drew Hendry:** You cannot guarantee the ability to recruit sufficient staff to meet the safeguarding needs and functions on time.

Katrina McLeay: We can say that we are providing sufficient levels of funding for the ONR. We are in constant conversation with it about its progress on recruitment and about the avenues it is pursuing. I know it is thinking innovatively and flexibly about how to meet this resource requirement. You have probably heard more detail from the ONR in person this afternoon. But this is an ongoing conversation we are having. It has already made progress. We accept that it is a small pool of expertise that we are fishing in, but at the same time we are working with the ONR to make sure it is in a position to take on this role at the appropriate time.

Richard Harrington: If I may make the point to you, Mr Henry, if we were not leaving Euratom, which we are, it would be like saying, "Can Euratom guarantee that we will have enough staff the year after next?" Well, perhaps it could not guarantee it, but it is the intention. It plans for it; it recruits for it; it trains for it. That is what we are doing.

Q152 **Drew Hendry:** With all respect, the Government have a bit of a deadline here, so they are not quite comparable situations, but let me move on. Evidence received from others by the Committee—and as the Minister will know from his Bill Committee—indicates that it will be very difficult to fill these positions, if it is possible at all, by March 2019 with UK workers alone. Minister, how much will you rely on EU and other foreign nationals to meet the safeguard requirements?

Richard Harrington: As far as the inspectors are concerned, it depends entirely on how the recruitment goes. We are starting to recruit now. The first phase has been done. We will be continuing with it. The Bill is



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through Second Reading, and it is our intention to make sure it has the people it needs.

Q153 Drew Hendry: There is no guarantee and you cannot say whether or not you would look elsewhere for workers.

Richard Harrington: As I say, it is like saying that Euratom will not be able to guarantee that. It has always delivered, and we will deliver.

Drew Hendry: Again, with respect, I would say the two situations are not comparable when you have a deadline.

Richard Harrington: I do not want to be pedantic about this, but when recruiting it depends who applies in response to adverts. Can I guarantee that enough people will respond to an advert? Well, it is like if you are advertising for parliamentary assistant. We have a proper plan for this, with ONR. It will have the financial resources to do it. It has already started. In recruitment terms, there is quite a bit of time to go.

Drew Hendry: But there are no guarantees, as you have clarified.

Richard Harrington: As with any recruitment programme, yes.

Q154 Drew Hendry: Turning to the less skilled workers, what analysis have you done to quantify the existing skills gap in civil nuclear and the gap the UK will face if movement of nuclear workers is restricted after we leave Euratom?

Richard Harrington: First of all, as far as the general sector is concerned, it is accepted that there is a skills shortage. In fact, it is one of the things I will be discussing in this very room on Friday about the nuclear sector deal. Skills is a very important topic. In the post-Brexit, post-Euratom exit scenario, it is our job to make sure that we have the skills necessary: for example, skilled construction skills and that sort of thing.

In other areas, with skilled staff, quite how this is going to be dealt with we do not know, because it depends very much on the negotiations and how they turn out. For example, from a previous job, I have a bit of experience of the current system the Home Office runs with the Migration Advisory Committee, the MAC. They work out where we need skills and where we need to prioritise people getting the ability to come in and work. Do not think this is something we are taking lightly. It is very important. It will be an important part of our negotiations, and it has been made very clear by us to DExEU that this is important to us. We are very aware of it.

Q155 Drew Hendry: Minister, I have had experience of the UK Home Office as well, and I am not quite as confident as you are. But we heard evidence earlier today that the new nuclear power stations will need very large numbers of construction workers, many of whom would qualify as low skilled despite their specialist training. How will you ensure nuclear sites can access sufficient numbers of low-skilled nuclear workers in the face of



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Brexit-related constraints on freedom of movement?

Richard Harrington: I will use your expression, which is a very good one. Lower-skilled workers are generally construction workers. I know they are in nuclear, but we are talking about the construction trades, so it is the general point.

Certainly the way it works now outside the EU is through the MAC, the Migration Advisory Committee, which is independent of Government and advises on where we have shortages. For example, in the past it gave advice to do with nurses. For lower-paid workers who would not be able to come in by other ways, it advises where we need employment, and arrangements are made to recruit those people—for example, nurses from the Philippines.

It would seem to me that that is a basis for what could be done for this. In negotiation terms, it is part of the general negotiations with the EU to do with the movement of workers. We are very conscious of it. Would you like to add something, David?

David Wagstaff: Thank you. I just wanted to make a distinction here. What is in the Euratom treaty is clearly up for negotiation, whether as a transition period or whether as part of the future arrangement: is this actual free movement of people or borderless movement of people? That is up for negotiation. The permissions, restrictions, border controls and immigration policy for this country is not a question that has to be negotiated with the EU. The UK can determine that. It will not be this department that determines it, but this department will certainly be influencing it. You can tackle this problem in more than one way. You can tackle it in the way the Minister has just described, and there are more levels of workers than just “unskilled” and “skilled”. There is a whole heap of them.

Drew Hendry: I will leave it there. I am not sure many people will be reassured by that, but thank you.

Richard Harrington: We are very aware of the issue that you have brought up.

Q156 **Drew Hendry:** On rather a different subject to that, the Euratom Supply Agency, the ESA, ensures that all member states have regular and equitable access to nuclear fuel, equipment and components. It has a right of option over nuclear materials produced in the EU. How will the Government ensure that UK imports are not impeded by the ESA’s right of option once we have left Euratom?

David Wagstaff: The Euratom Supply Agency has a number of roles and functions. The one that you are describing is a kind of option of last resort, which is where it can call material in if required. That was written in the 1950s when there were concerns about the security of supply of uranium, and it has never been used. It is a question of principle, but it



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is not a question of practice. In fact, it turns out there has not really been a security of supply issue.

Where Euratom Supply Agency has a much more regular impact on the industry is that it has to approve any contracts for the movement and export of materials, fuels and so on within the EU. The UK's position paper that we published in the summer suggested that it would be good to get clarity on that particular question as part of the separation discussions. The EU 27 side said it did not think this was a separation issue but rather saw it as part of the future relationship. Therefore, it has not been discussed yet. We have continued to put it very high on our list of priorities, and it will be one of the first things on the agenda when we have our future discussion.

Q157 Drew Hendry: Given that it has not been discussed yet, how will you ensure, Minister, the UK's security of supply of nuclear materials, including fuels, in the event of an EU shortage?

Richard Harrington: It will be discussed. It is our top priority for discussion. The reason it has not been discussed yet is because we have not got on to the substantive negotiations; it is not because we have forgotten to discuss it or it is not a top priority for us. We are very aware of the issue, and so is Euratom.

Q158 Drew Hendry: The Government's safeguards position paper states that our existing nuclear supply contracts within Euratom, which have been approved by the Euratom Supply Agency and European Commission, will remain valid and will not require any further approvals. What is plan B if this point is not agreed during the negotiations, when you get to that point?

David Wagstaff: Either the existing approvals are in place and still valid or they are not. If they are not, it does not mean that everything stops. It is a bureaucratic frustration rather than a ceasing of all trade.

Q159 Drew Hendry: What is the plan B for that bureaucratic frustration?

Richard Harrington: They would apply for new ones.

David Wagstaff: They would have to apply for new ones. We have not had the conversation yet, as I have said, but we assume that, if the Euratom Supply Agency was not prepared to agree with us that there should be continuity, they would have to reapply.

Q160 Drew Hendry: How long would it take to agree and approve a replacement nuclear supply contract if that proves to be necessary?

David Wagstaff: As the Minister said earlier, we are in uncharted territory. No country has ever left the EU or Euratom.

Drew Hendry: There is a reason for that.

David Wagstaff: It is quite difficult for me to answer that question.



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Drew Hendry: You have no estimate.

Richard Harrington: We will try to replicate the same agreements we already have but personalised for us not being in Euratom.

Drew Hendry: There is no estimate; there is no guess of how long that is going to take.

David Wagstaff: This is a question for the Euratom Supply Agency itself. I am sorry; I should have made this clear. It is the countries that remain in the EU that will require this approval. It is an export from an EU country. Depending on the outcome of the discussions, we will either have a close association with Euratom, which could well involve still being part of the Euratom Supply Agency, in which case the approvals will still be valid, or we will not be, in which case the UK will not come under the umbrella of the Euratom Supply Agency.

Q161 **Drew Hendry:** It is fair to say that in times of need there are no guarantees here from the UK Government.

Richard Harrington: That is correct, but it is part of the general negotiations. It is fair to say generally that negotiations cannot be guaranteed. We made that clear from the beginning. We are very confident that we will complete the negotiations in the time permitted once we are given permission to start, which we are hoping will be very soon.

Q162 **Chair:** Thank you very much. Thank you for giving evidence today. There is just one thing that would be very useful for our Committee. Minister and Mr Wagstaff, you have spoken today about a series of milestones and things that need to be achieved to avoid a cliff edge and to get the sort of arrangement we want, i.e. the nuclear co-operation agreements with the different countries and agreement from the European Commission.

I recognise that some of that cannot start yet, but I was wondering whether you could get back to the Committee, either the Minister or you, Mr Wagstaff, with a set of milestones that need to be achieved to get us to where we need, if possible with some dates of when they need to be achieved. That would help us when we are putting together our report.

Richard Harrington: I would be very happy to do that, Madam Chair. Do you mean by letter or by coming again?

Chair: By letter would be great.

Richard Harrington: Yes, I can do that.

Chair: Thank you very much for your time this afternoon. It has been very interesting.

Richard Harrington: Thank you for having us.