Public Bill Committee

NUCLEAR SAFEGUARDS BILL

First Sitting

Tuesday 31 October 2017

(Morning)

CONTENTS

Programme motion agreed to.
Written evidence (Reporting to the House) motion agreed to.
Motion to sit in private agreed to.
Examination of witnesses.
Adjourned till this day at Two o’clock.
No proofs can be supplied. Corrections that Members suggest for the final version of the report should be clearly marked in a copy of the report—not telephoned—and must be received in the Editor’s Room, House of Commons,

not later than

Saturday 4 November 2017
The Committee consisted of the following Members:

**Chairs:** † James Gray, Steve McCabe

† Blomfield, Paul (Sheffield Central) (Lab)
† Bradley, Ben (Mansfield) (Con)
† Carden, Dan (Liverpool, Walton) (Lab)
† Debonaire, Thangam (Bristol West) (Lab)
† Gibson, Patricia (North Ayrshire and Arran) (SNP)
† Gill, Preet Kaur (Birmingham, Edgbaston) (Lab/Co-op)
† Harrington, Richard (Parliamentary Under-Secretary of State for Business, Energy and Industrial Strategy)
† Harris, Rebecca (Castle Point) (Con)
† Harrison, Trudy (Copeland) (Con)
Hendry, Drew (Inverness, Nairn, Badenoch and Strathspey) (SNP)
† Lewer, Andrew (Northampton South) (Con)
† Maclean, Rachel (Redditch) (Con)
† Norris, Alex (Nottingham North) (Lab/Co-op)
† Robinson, Mary (Cheadle) (Con)
† Smith, Eleanor (Wolverhampton South West) (Lab)
† Sunak, Rishi (Richmond (Yorks)) (Con)
† Syms, Sir Robert (Poole) (Con)
† Whitehead, Dr Alan (Southampton, Test) (Lab)
† Wragg, Mr William (Hazel Grove) (Con)

† attended the Committee

**Witnesses**

Dr Mina Golshan, Deputy Chief Inspector and Director Sellafield, Decommissioning, Fuel and Waste Programme, Office for Nuclear Regulation (ONR)

Tom Greatrex, CEO, Nuclear Industry Association

Rupert Cowan, Senior Commercial and Nuclear Energy Lawyer, Prospect Law

Jonathan Leech, Senior Commercial and Nuclear Energy Lawyer, Prospect Law
Public Bill Committee

Tuesday 31 October 2017

(Morning)

[JAMES GRAY in the Chair]

Nuclear Safeguards Bill

9.25 am

The Chair: Before we begin, I have a few little parish notices. First, for all the activities that we indulge in when considering the Bill, both here and in the Committee Room, the orders of procedure are precisely the same as in the main Chamber—for example, no eating and drinking; preferably jackets on, unless it is extremely warm, in which case Members may consider taking them off; ties, of course, are now optional, but I always wear mine; and I tend to be a little on the conservative side and maintain standards.

We will talk through the procedure later. This stage, for those who have not done it before, is rather like a Select Committee. You are bringing witnesses in front of you to inquire of them their expert knowledge about what is in the Bill. It is different from a Select Committee in the sense that you are not quizzing them, holding them to account or giving them a tough time; you are seeking to extract the maximum benefit from their evidence. This is not party political; it is like a consensual Select Committee.

The Bill is very narrowly drafted. It is about a particular subject, not the entire spectrum of what Euratom does or stands for. We will be reasonably strict about trying to keep people within the terms of the Bill, so that they do not ramble widely. We now have a couple of formalities to deal with.

Ordered,

That—

(1) the Committee shall (in addition to its first meeting at 9.25 am on Tuesday 31 October) meet—
(a) at 2.00 pm on Tuesday 31 October;
(b) at 11.30 am and 2.00 pm on Thursday 2 November;
(c) at 9.25 am and 2.00 pm on Tuesday 7 November;
(d) at 9.25 am and 2.00 pm on Tuesday 14 November;
(e) at 11.30 am and 2.00 pm on Thursday 16 November;
(2) the Committee shall hear oral evidence on Tuesday 31 October in accordance with the following Table:

<table>
<thead>
<tr>
<th>Time</th>
<th>Witness</th>
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<tbody>
<tr>
<td>Until no later than 10.00 am</td>
<td>Office for Nuclear Regulation</td>
</tr>
<tr>
<td>Until no later than 11.25 am</td>
<td>Nuclear Industry Association; Prospect Law</td>
</tr>
<tr>
<td>Until no later than 2.30 pm</td>
<td>EDF Energy</td>
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<td>Until no later than 3.00 pm</td>
<td>Prospect; Unite</td>
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<tr>
<td>Until no later than 3.30 pm</td>
<td>Professor Juan Matthews, Visiting Professor, Dalton Nuclear Institute</td>
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</tbody>
</table>

(3) proceedings on consideration of the Bill in Committee shall be taken in the following order: Clause 1; the Schedule; Clauses 2 to 5; new Clauses; new Schedules; remaining proceedings on the Bill;

(4) the proceedings shall (so far as not previously concluded) be brought to a conclusion at 5.00 pm on Thursday 16 November.
—(Richard Harrington.)

Ordered,

That, subject to the discretion of the Chair, any written evidence received by the Committee shall be reported to the House for publication.—(Richard Harrington.)

The Chair: Copies of written evidence that the Committee receives will be made available in the Committee Room, and all the papers are on the table behind you.

Ordered,

That, at this and any subsequent meeting at which oral evidence is to be heard, the Committee shall sit in private until the witnesses are admitted.—(Richard Harrington.)

The Chair: We will now discuss the general line of questioning during this sitting. Let us try to do that reasonably briefly, because we do not have much time. As soon as we have agreed what questions we want to ask, we will have the witnesses and the public in to start the sitting.

9.27 am

The Committee deliberated in private.

9.29 am

On resuming—

The Chair: If Members of the Committee have interests to declare, they should please do so now.

Dan Carden (Liverpool, Walton) (Lab): I am a member of Unite the union.

Trudy Harrison (Copeland) (Con): My husband, father and brother work at Sellafield, as well as many other family members.

Paul Blomfield (Sheffield Central) (Lab): I am a member of Unite.

Examination of Witness

Dr Mina Golshan gave evidence.

9.30 am

Q1 The Chair: I welcome our first witness, Dr Mina Golshan, who represents the Office for Nuclear Regulation. Dr Golshan, thank you very much for coming. Perhaps you can kick off our considerations with a brief statement about who you are, what you do and what you think about the Bill.

Dr Golshan: Thank you for that introduction. I am director and deputy chief inspector at the Office for Nuclear Regulation. My main responsibilities are Sellafield, decommissioning fuel and waste, but I am also senior responsible owner for ONR’s work in relation to establishing a state system of nuclear materials accounting and control.

Q2 The Parliamentary Under-Secretary of State for Business, Energy and Industrial Strategy (Richard Harrington): Dr Golshan, thank you for appearing today. I know that
you are a regular at these things. From your point of view, how critical are safeguards in underpinning the UK nuclear industry?

Dr Golshan: Establishing a domestic safeguards regime, now that the policy decision has been made that the UK will be leaving the Euratom treaty, is fundamental to the industry in the UK. It is the cornerstone of establishing nuclear co-operation agreements. It is essential for the industry to operate. Without a domestic safeguards regime in the UK that works in line with the International Atomic Energy Agency and Euratom in the UK, among other things.

We currently have a safeguards function, as set out in the Energy Act 2013, but it is not a regulatory function. The main purpose of that function is to facilitate the work of the International Atomic Energy Agency and Euratom in the UK, among other things. The Bill will give us the powers, on a par with safety and security, to regulate nuclear safeguards on civil nuclear sites.

Q3 Paul Blomfield: I want to ask you about the Office for Nuclear Regulation’s capacity to take on the additional responsibilities implicit in the Bill, given your current staffing levels and the large number of people employed by Euratom to fulfil these roles.

Dr Golshan: Perhaps I should start by saying that, given our membership of Euratom, it has not been necessary for the UK and ONR to build capacity and resilience in this area. Now that we are in a different position, we have started to recruit. The first phase of recruitment is complete. We successfully recruited four individuals, three of whom have already started with us.

An area of shortage for us was subject matter expertise. That was a worry for me, but I am pleased to say that we will hopefully be in a position to rectify that by the middle of this month.

Broadly, we need to continue with our recruitment if we are to staff ourselves in order to deliver the new safeguards function. In the first instance we need an additional 10 to 12 inspectors, which will bring us to a level that allows the UK to fulfil its international obligations, but we have already heard from the Secretary of State that the intention is to put in place a regime that is equivalent to Euratom. That will require ONR to recruit further and will mean around 20 additional inspectors.

We know that we are dealing with a limited pool of expertise, and our success so far, although encouraging, is by no means the end of the story.

The Chair: Dr Golshan, can I ask you to speak up slightly, because this is a very large room and we are having trouble hearing you. I am getting older—you know how it is.

Q4 Trudy Harrison: Thank you for coming here this morning, Dr Golshan. I understand that the ONR currently has the responsibility for safety and security at the Civil Nuclear Constabulary. I am keen to understand how the relationship would work with safeguards.

Dr Golshan: May I start by saying that we do not have the responsibility for CNC; we regulate civil nuclear security. We currently have a safeguards function, as set out in the Energy Act 2013, but it is not a regulatory function. The main purpose of that function is to facilitate the work of the International Atomic Energy Agency and Euratom in the UK, among other things. The Bill will give us the powers, on a par with safety and security, to regulate nuclear safeguards on civil nuclear sites.

Q5 Alex Norris (Nottingham North) (Lab/Co-op): Dr Golshan, you have mentioned the sort of headcount you will need for inspectors. What is your current total establishment, and by how much do you think you will need to grow?

Dr Golshan: We have a small project team that helps us deliver this function. I have a project manager and a project lead, and we have interactions with our human resources department and our IT department, which in itself is a small group. We need to grow this project team in the first instance to enable the project to deliver and go forward. All in all, we have five key people in the project team—project manager, delivery lead, policy lead, myself and a subject matter expert—and the team overall has links with the HR department and so on, as I described. We will need to grow this project team to help us deliver when we come to 29 March 2019, and we are in the process of doing so.

Q6 Ben Bradley (Mansfield) (Con): Can you tell us a bit about the ONR’s track record of delivering new regulation previously? Do you feel that you have the right relationships within the industry to deliver this new programme?

Dr Golshan: It is fair to say that this is unprecedented territory for us as far as the size of the job is concerned. In the past we have not had to establish a new function from afresh to this extent, but we have got experience of setting out and working with officials from the Department for Business, Energy and Industrial Strategy—and previously the Department for Energy and Climate Change—to bring forward new regulation.

We are working closely with officials at the Department for Business, Energy and Industrial Strategy and we have engaged with the industry—I have had a number of meetings with the industry. We are explaining what we are doing, how far we have gone down this route and what there is left to do. We are working with all our stakeholders to make a success of this.

Q7 Paul Blomfield: May I follow up on your earlier answer, Dr Golshan? You have been clear and helpful. From what I understood, you said that you were recruiting an additional 10 to 12 inspectors now, with the potential of a further 20. Is that the whole size of the establishment you might be looking for? I might be wrong, but I understand that Euratom employs about 40 people on nuclear safeguarding in relation to UK establishments.

Dr Golshan: Let me break it into two bits. Our intention is to start recruiting in the new year for the additional 10 to 12 people we will require. The reason is that we were waiting for the Second Reading of the Bill to give us some certainty in relation to the people we are going to take on permanently. That process will start. In relation to your next question, on Euratom’s numbers, for its own purposes, Euratom carries out activities in the UK that, as a state delivering an equivalent regime, we would not need to deliver. The order of 20 to 25 is not far from what we need to staff ourselves to deliver this function.

Q8 Paul Blomfield: This is a sector with which most of us are—with some exceptions—relatively unfamiliar.

The Chair: Mr Blomfield, could you speak up? Not all of us can hear you.

Paul Blomfield: Can you give us a little more understanding of the talent pool from which you are drawing, the recruitment opportunities and the training needs there might be to fulfil the skills needs you anticipate?
**Dr Golshan:** As I mentioned at the beginning, although these do not seem like large numbers, we are dealing with a limited talent pool here: the expertise is unique. As I said, the UK as a whole has not had to focus on developing resilience in this area, so we are limited in what and who we can recruit.

The next step, if we are getting the right expertise in these people, is to turn them into regulators and inspectors. That means that our training function—training materials and expertise in training these individuals—needs to develop. We have started that process, but it is a long road and I am not going to sit here and pretend that it is all going to be a smooth run.

**Q9 Paul Blomfield:** Could you give us a sense of the length of that road? How long will it take you to get from A to B?

**Dr Golshan:** Our aim, currently, is to have a system in place that enables the UK to fulfil its international obligations by March 2019, which is when we intend to leave Euratom. I have been very clear in the past—I will repeat it here—that we will not be able to replicate Euratom standards on day one. That is unrealistic, and given the scale of what needs to be put in place, I fear that if we go that way, the best will become the enemy of the good. So it is important that we focus our efforts on delivering a regime that enables the UK to meet its international obligations.

**Q10 Mary Robinson (Cheadle) (Con):** Now that the Bill has been introduced, what in your view is the main priority in developing a new nuclear safeguards regime for the UK?

**Dr Golshan:** There are a number of aspects. The first one is to ensure that the secondary legislation is in place at the right time, because that provides us with the mechanisms to exercise our powers. The Bill itself is an enabling part—it gives us the fundamental powers—and the secondary legislation gives us the mechanisms to deliver. Secondary legislation will also give us some certainty in relation to what guidance and standards we need to develop to make this happen.

For us, we need to have an IT system; a safeguards information management system. It is a live system that enables us to get data from our licensees, to process those data and to put them into a reporting format that the IAEA currently receives from Euratom. We are working on that; it is at proof of concept stage at the moment. Once we have established that we are able to do it, we will need to move into a phase that determines whether we are going to do it in-house, tender it out, or have a combination of the two.

**Q11 Dr Alan Whitehead (Southampton, Test) (Lab):** You mentioned that you were clear that we could not have a complete regime up and running by March 2019, and that the right way to proceed was to get the basics in place, as it were. However, as far as I understand, we are going to have to undertake a series of additional activities in order to get ourselves to a position that would have been equivalent to Euratom in the first place—nuclear co-operation agreements, negotiations with the IAEA, and so on. What do you think is the realistic timetable for getting those agreements in place, so that we actually have a final replication of everything that we were previously doing under Euratom as far as safeguarding is concerned?

**Dr Golshan:** I should say that, on negotiating nuclear co-operation agreements and completing the discussions with IAEA and Euratom, although we provide advice to the Government, it is not for me to sit here and determine or estimate a timetable. It is really strictly for the Government to conduct those negotiations, and I think that it is perhaps a question better answered by them.

**Q12 Dr Whitehead:** But to what extent do you think that the achievement or otherwise of those wider agreements impinges on the basic work that you indicated would be necessary to put in place by March 2019?

**Dr Golshan:** It is fundamental to it. We need to have a basic safeguards regime—a domestic safeguards regime—in place that enables the UK to demonstrate that it is fulfilling its international obligations under various treaties. Once that is in place we will be able to demonstrate that we have a rectified domestic safeguards arrangement in place.

**Q13 Dr Whitehead:** Right, but as far as I understand it, we need to have, not a concept of theory but a practical safeguards regime in place—

**Dr Golshan:** Yes.

**Dr Whitehead:** In order to demonstrate to the IAEA that we are able to fulfil a function relating to nuclear safeguards outside Euratom.

**Dr Golshan:** Absolutely.

**Dr Whitehead:** And those discussions, I understand, are proceeding at the moment but have by no means reached any conclusion. Are you confident that in terms of replicating the UK’s safeguarding function, the basic structure you have outlined to us this morning that needs to be in place will be able to fulfil its functions and, in particular, assure and satisfy the IAEA that it can safely proceed with new treaty arrangements with the UK?

**Dr Golshan:** Yes is the short answer. We do not have to have a regime equivalent to Euratom in order to be able to proceed with concluding those agreements and negotiations, so what the IAEA needs the UK to have in place is a domestic safeguards regime that meets its international obligations under the non-proliferation treaty and others. So although there are risks here for us to complete the work we are doing, I think it is a much more achievable objective for us to aim for, rather than replicating Euratom in the first instance. I should again emphasise that having a regime that is equivalent to Euratom is not a prerequisite to complete those agreements and negotiations.

**Q14 Trudy Harrison:** Assuming that the Bill goes ahead as written, what will be possible on day one and what will not be possible, and how will that impact on our 17 nuclear sites? I ask with specific regard to my constituency of Copeland, which has Sellafield, the low level waste repository and the national nuclear laboratory.

**Dr Golshan:** The Bill is an enabling Bill. It gives us the broad powers in parallel with nuclear safety and security. It gives the Secretary of State the powers to make nuclear safeguards regulations. That is the secondary legislation that I referred to. In relation to what is possible at our nuclear sites—
Q15 Trudy Harrison: In terms of moving fissile material, exchange of knowledge and those kinds of practical aspects of work that need to happen?
Dr Golshan: There is a nuclear co-operation agreement and there are a number of states that, as a matter of policy, will not engage with a third country that does not have a safeguards regime in place. So our aim, and the Government’s aim, is to establish a nuclear co-operation agreement with these states as a matter of priority. We are advising the Government and providing subject matter expertise. As to what will be possible on nuclear sites, we will continue to provide reports to the IAEA; that is a fundamental aspect of what a safeguards regime needs to deliver. As I said, the safeguards information management system that we will be putting in place is fundamental to achieve that.

Q16 Trudy Harrison: I just wonder about the benefits of the transition period, once we have gone through this stage, to enable those bilateral agreements—the 123 agreement and others—with the States and the many other countries outside the European Union that we work with daily. How necessary is that and how long should it be?
Dr Golshan: I cannot comment on how long it should be; I think that depends on the scope of the negotiations and what can be achieved within the timescales we have left. From our perspective, a transitional arrangement will be extremely helpful. It will enable us to have parallel working arrangements in place with Euratom to conclude the discussions that we need to have with it, first, to understand what activities it currently undertakes on nuclear sites, but also the Secretary of State has mentioned that there should not be any weakening of standards in the UK following our departure from Euratom. The transitional period, as I see it, will seek to achieve that.

Q17 Dan Carden: The Bill does not cover other aspects of the UK’s relationship with Euratom, such as research funding, and if you were making a plea to the Minister here today, or—

The Chair: As a very tough Chairman, I am going to say that we are not allowed to discuss things that are not in the Bill; we can only discuss those things that are in the Bill. Therefore, no matter what your thoughts on that subject may be, I am very sorry, but you will have to raise them in another Bill Committee at some other time. I am sorry—I hope people do not mind—but we have got to keep to what is actually in the Bill itself.

Q18 Andrew Lever (Northampton South) (Con): Are there any other examples around the world of where national regulators are responsible for safeguarding in the way that this Bill proposes?
Dr Golshan: Numerous examples—a Canadian regulator, the US regulator, the Swiss regulator, and even though Finland is out of the European Union and part of the Euratom treaty, given that safeguarding is the responsibility of state, the Finnish regulator sees itself as being responsible for providing assurance to the state in that regard.

Q19 Dr Whitehead: You mentioned the different relationships that different countries have, both internationally and with Euratom. This Bill, as has already been set out on Second Reading, is very much a contingency Bill, in the event that—effectively—no other relationship with Euratom is possible after March 2019. How would you see a possible future relationship with Euratom that might assist in any way with lessening the burden that you clearly have on you at the moment to establish a completely new regime, and indeed a completely independent set of inspection and reporting arrangements? Should it be an association similar to that of Switzerland, or would you envisage something rather closer to Euratom for the future, if that can be achieved?

Dr Golshan: I think that is probably a question better answered by our legal colleagues, but that aside, I am aware that the Euratom treaty provides for associate memberships, either as a whole or in particular aspects, and that article 206 of the treaty in particular facilitates that. However, I am not an expert on that and I think it would be inappropriate to comment as to whether an association membership is possible or on how it would be possible.

Q20 Dr Whitehead: A final thought for you, rather more for my curiosity than anything else. My understanding at the moment is that the inspection regime under Euratom means that there are effectively inspectors who are domiciled in the UK but working for Euratom. What happens to those inspectors in March 2019? Can we, as it were, steal them for the UK, or do they get exported back to Euratom at that point?

Dr Golshan: I think that is primarily probably a question for those individuals, and more broadly for the Government, to negotiate with Euratom. As far as I understand it, however, the number of these inspectors is no more than a handful and we will need significantly more than that, as I explained earlier. It is a matter of choice for them. If they wish to join the regulator—ONR—then I am sure that we will be more than happy to absorb them.

The Chair: Unless there are further questions from colleagues, I thank you very much, Dr Golshan, for your excellent and most interesting information, and indeed for expressing it in such careful, precise and brief terms, which gives us an extra five or 10 minutes for the following panel. So thank you very much indeed for coming.

Dr Golshan: It was a pleasure to be here. Thank you.

Examination of Witnesses
Tom Greatrex, Jonathan Leech and Rupert Cowan gave evidence.

9.54 am

The Chair: I welcome the next panel to give evidence, and—without meaning any disrespect to the other two gentlemen—I particularly welcome back our former colleague, Tom Greatrex. Good to see you back here. You probably remember the tough time that you gave me at various times—you are going to get a tough time, too. Welcome to the other members of the panel, from Prospect Law. We have until 11.25 am, which is a reasonable time; but we will have to stop at 11.25 even if we are speaking, so I will try to wrap up a little bit before. First, I ask the three witnesses to introduce yourselves and, if you wish, to give a brief introduction to your thoughts on the Bill.
Rupert Cowan: I am Rupert Cowan, with Prospect Law. My background is advising, as a lawyer, the nuclear industry, providers of services, operators and generators. I am a very worried lawyer at the moment, having seen a possible amendment that you might consider to achieve that neutrality. It is in paragraph 4.

Jonathan Leech: Obviously, the Government’s stated intent appears to be to replicate, as far as possible, the current safeguarding regulatory regime that we have in place with Euratom. In a sense, all we should be looking for in the Bill, as a piece of enabling legislation, is to see wording that allows that to happen. Our concern around the way that power is expressed is that it appears currently to be written more from the perspective of the IAEA voluntary offer safeguarding agreement text than the Euratom treaty text. You might argue it is a fairly subtle distinction, but if we are seeking to replicate what we have, I would suggest that a good place to start is the high-level requirements of the treaty, which talk in terms of not diverting from declared use, and those at least should be considered as an additional scope that would be brought within the power, rather than purely focusing on material being diverted from civil activities. Hence the wording that we have proposed in the note is rooted in the treaty and would not take anything away from current scope, but would merely ensure that it is within the power to replicate.

Q22 The Chair: Perhaps you could expand on what that proposal is.

Jonathan Leech: There are obviously links between the two. There are statements in the treaty that article 50 does apply to the Euratom treaty, but there are sound legal arguments available that it is not an automatic consequence and in fact you have to follow a separate legal path. There are statements in the treaty that article 50 does apply to the Euratom treaty, but there are sound legal arguments available that it is not an automatic consequence and in fact you ha ve to follow a separate legal path. Hence the wording that we have proposed in the note is rooted in the treaty and would not take anything away from current scope, but would merely ensure that it is within the power to replicate.

Q23 Alex Norris: This is probably a question to Rupert or Jonathan. You said that you watched the Second Reading with interest. You will have heard in that session that if we leave the EU, which we will, we will by definition have to leave Euratom. If Parliament was your client, would that be the guidance you would give it—that one decision necessitates the other?

Jonathan Leech: No.

Rupert Cowan: Absolutely not.

Jonathan Leech: There are obviously links between the two. There are statements in the treaty that article 50 does apply to the Euratom treaty, but there are sound legal arguments available that it is not an automatic consequence and in fact you have to follow a separate but similar process to exit Euratom. In a sense we have moved beyond that, to the extent that the withdrawal notice makes express reference to Euratom, so to the extent that there are two separate processes, we have already triggered both of them. That has maybe put us in a more difficult position in negotiating a potential extension period or remainder within Euratom, which would alleviate a lot of the concerns around the current two-year timetable, which creates some serious problems for the industry. The advice would be that you do not have to accept this and it may not be in your interests to do so.

Rupert Cowan: I would add, the Minister has made statements—

The Chair: Briefly, as we are starting to get outside the scope of the Bill.
Rupert Cowan: Fair enough.

The Chair: By all means comment briefly if you wish to—I would not want to be declared a tyrant—but I would stick to the terms of the Bill, which is nuclear safeguards, rather than the extempore bits.

Rupert Cowan: Fine. The point that lies within the Bill and should be connected to the question is that the next step chronologically is to renegotiate the nuclear co-operation agreements. Unless the Bill provides a basis for safeguards, which gives reasons to those that do not wish to co-operate easily with us to co-operate, then you will find renegotiation very difficult.

The Chair: That will be a matter for another day. I tend to be quite strict with the Committee because it is a topic that can spread its wings in a whole variety of different areas. We are tasked by the House of Commons simply with discussing the terms and the wording of the Bill, rather than the wider consequences or circumstances.

Q24 Trudy Harrison: With regard to the ownership of fissile material, I understand that Euratom actually owns the plutonium at Sellafield. Therefore is it not in the European Union’s interests to be co-operative, because would it really want that material sent back to it?

Rupert Cowan: Not necessarily.

Jonathan Leech: There is no question of that material being sent back.

Q25 Trudy Harrison: Because it would be practically impossible to do so?

Jonathan Leech: It is the UK’s responsibility.

Q26 Trudy Harrison: Who owns it?

Jonathan Leech: Ownership will transfer to the UK on exit from Euratom.

Q27 Trudy Harrison: But who currently owns the material?

Jonathan Leech: I think technically that material belongs to Euratom at the moment.

Q28 Trudy Harrison: That is certainly my understanding: that Euratom owns all of the fissile material in the UK in the civil nuclear industry.

Rupert Cowan: That is the effect of the treaty.

Q29 Trudy Harrison: Rupert, you mentioned interruptions to the industry. Could you be more specific? What interruptions? What needs to happen to avoid those interruptions? What are the consequences?

Rupert Cowan: It is difficult to answer that question and remain entirely within the Bill, so I expect that James Gray will jump at me.

The Chair: You may digress very slightly, but don’t get too carried away.

Rupert Cowan: Essentially, the safeguards regime is the first step. The second step is the replacement of the existing nuclear co-operation agreements with the jurisdictions that have them with us, notably the European Union, the United States, Korea and Japan. If Euratom is no longer included in our safeguards regime, each of those agreements must be renegotiated, and each of them will require a substantial resource to achieve that. For example, America requires a section 123 agreement under the US Atomic Energy Act. If there are any members that—for their own reasons—do not immediately wish to agree, they can rely on the fact that the safeguards are different from the Euratom safeguards, and say, “We are not able to agree a nuclear co-operation agreement with you yet,” or “in the future,” depending on what is driving them.

Q30 Trudy Harrison: So I understand, but it is a first point of getting this Bill through.

Rupert Cowan: Absolutely.

Q31 Trudy Harrison: Which will then give us the opportunity to progress those bilateral agreements.

Rupert Cowan: Correct, and nothing that we are saying suggests that this Bill should not go forward, save for the amendment we suggested, which would make those negotiations more straightforward.

Q32 Dr Whitehead: You mentioned that the Bill is first a contingency Bill and secondly an enabling Bill, and that the main work will be putting in place secondary legislation to get us to a basic safeguarding regime that by March 2019 will operate pretty much as Euratom does at the moment. How realistic do you think that process is, in respect not of the Bill but of what needs to be done to get to that position, on the basis of the Bill?

Jonathan Leech: May I first go back to the point about the Bill being a contingency? It is very important that the Bill is no sense a contingency.

The Chair: Perhaps you could speak up a little. We are having slight difficulty hearing you.

Jonathan Leech: The Bill is in no sense a contingency, unless we get into a position where we simply do not need our own domestic safeguards regime. Otherwise, it is necessary—it is essential. We have to have it, and we have to have it now. We need the secondary legislation on the table as soon as possible, if not now, and then we need the resource within ONR that we heard about earlier. Critically, it is not just that we need all that in place at the end of the two-year period; we also need to be able to demonstrate that to all those we seek to negotiate replacement nuclear co-operation agreements with, so that we can also have those agreements in place seamlessly at the end of the two-year period.

There is another point to clarify in relation to the role of the IAEA. We are not negotiating nuclear co-operation agreements with the IAEA; we have to negotiate with them on the voluntary offer agreement. Those negotiations are progressing, but I suspect that they are not negotiations that will be critical from a time perspective; it will be the negotiations of the nuclear co-operation agreements, and there we are at the mercy of political will in any number of counterpart states. That is where it becomes extremely uncertain as to whether it is even possible to have those things in place within that timescale. Certainly, to stand any chance of that, we should be in a position today to say, “These are our proposed regulations, this is our resource, this is where we are with IAEA. Can we start talking to you seriously about an NCA?” It is not enough to be able to say, “This is our enabling legislation.” We need to be a long way ahead of this if we are going to have any chance of meeting that two-year timescale.
Q33 Dr Whitehead: A first question on that statement: are there any individual bilateral agreements that one might think ought to be a priority for negotiation as opposed to others? Secondly, if one did engineer some kind of transitional arrangements with Euratom, would it be satisfactory for continued membership, effectively, of Euratom while those negotiations took place? Would that effective transitional membership of Euratom after March 2019 provide the sort of facilitation for those individual agreements to be satisfactorily concluded that would actually give comfort as far as the overall picture of those agreements was concerned?

Tom Greatrex: It could do. You heard from the ONR earlier about the attractiveness of having a period of parallel working. That is in relation to the safeguarding activity and carrying out that function. It is a similar position with relation to co-operation agreements which currently exist under the Euratom umbrella. So the nuclear co-operation agreement we currently have with the US is as a member of Euratom. We will need to have a bilaterally negotiated nuclear co-operation agreement in the future, because it is a legislative requirement in the US and I am sure you will hear from others in evidence about why that is so critically important to particular power stations and projects. Enabling there to be a position where you are covered by the Euratom nuclear co-operation agreement while a bilateral nuclear co-operation agreement is finalised, agreed and put in place is exactly the kind of transitional arrangement or contingency or parallel working—whichever choice of words you want to use for broadly the same thing—is something that the industry has said is very desirable. You have also heard from the ONR that this will help them in the work they will be tasked to do as a result of the provisions of this Bill.

Jonathan Leech: May I add a thought on the concept of associate membership and the extent to which we can rely on that? Of course, the nuclear co-operation agreements we are talking about are agreements with Euratom for the benefit of Euratom members, who are fully subscribed to all the obligations and commitments that entails, including acceptance of all Euratom regulation, including acceptance of European Court of Justice jurisdiction. When we come to look at the transitional phase, we should certainly not assume that all counterparts of those co-operation agreements with Euratom would accept that they should somehow continue to apply to the UK if the UK is something other than a fully subscribed Euratom member. So when we talk about associate membership or a third state of some sort and other examples around, that we can see where others have relationships with Euratom, that in itself would not solve the immediate need to ensure that we have the co-operation agreements in place that we need.

Q34 Dr Whitehead: Could you perhaps expand on that a little, because there are a number of potential lines that one can move down in this process? One, presumably, is to seek some kind of long-term associate membership of Euratom. We have two models in place for associate membership of Euratom at the moment, but I understand that they do not provide fully for the sort of arrangement that we might want to consider, which would cover all the issues of the transfer of responsibility to the UK jurisdiction.

Secondly, we might move down the line of a transitional arrangement, in order to get to the position—not at a more leisurely pace, but at a rather more possible pace—of possible complete rupture with Euratom, but in circumstances in which we might have got NCAs in place in a reasonably orderly way. What, in your view, are the realistic prospects of going down one or other of those routes in the sort of time that we have in front of us?

The Chair: Again, we need a brief answer, because we are drifting slightly wide of the terms of the Bill. We have plenty of time, but even so.

Rupert Cowan: Let me bring it within the terms of the Bill, to make you feel happy, Mr Gray. Obviously the Bill enables those discussions, as has been described, but the chances of being able to follow either of those routes successfully before March 2018 are zero. The possibility of associate membership is not zero but that possibility, having been fulfilled if counterparts are willing to allow it, would not allow us either the opportunity or the time to negotiate the necessary co-operation agreements with the important counterpart jurisdictions that we need.

The second alternative that you suggest is of maintaining full membership for a period, so maybe it could be extended by two years with a sudden cut-off being agreed, and being able during that two-year extension to renegotiate NCAs. That is probably the most practical and preferable solution, but whether or not members of Euratom would be prepared to allow the UK to do that is a very different question.

Unfortunately, it is inevitable that we will be faced with discussions about renegotiating our NCAs with key counterparts who are neither motivated to agree quickly nor able to, because of their own international obligations of recognising the adequacy of our safeguarding arrangements, and there will be a point at which they cease to apply under Euratom, with consequences that remain to be seen.

I mean, I cannot imagine the United States immediately withdrawing its expertise from the various sites, but it may choose to. Similarly, Korea is a very important counterparty. Once the agreement comes to an end, the opportunity of persuading Korea to invest in Moorside goes away from us.

Q35 Mary Robinson: This question is actually a continuation of that line of thought. How far does UK participation in Euratom enable access for nuclear research funding?

Rupert Cowan: In terms of research, which is a separate issue, it is fundamental. All the joint research—the Joint European Torus and so forth—is predicated on membership of Euratom, and the funding arrangements are a subset of the arrangements of the Euratom members. At the moment, it will stop, and unless central Government funding is made available people will return home.

Q36 Dr Whitehead: I think this is a question about an issue that we were both concerned about. Mr Cowan, you mentioned the date of March 2018. That presumably is because you feel that that is the point at which—?

Rupert Cowan: Well, it is the article 50 notice. [Interruption.] Did I say 2018? I meant 2019—apologies.
Dr Whitehead: Okay. Assuming we did mean 2019, if we are not in a position—even if we are reasonably close to a position—where we have done all the secondary legislation arrangements for nuclear safeguarding, but we have not made too much progress in a number of other areas relating to transposing Euratom responsibilities to the UK, and/or a number of those NCAs are in a difficult position as far as their conclusion is concerned, what would be the effect on the nuclear industry at that point?

Rupert Cowan: It is very difficult to project, but it does mean that, unlike other industries, trade has to stop—trade in materials, in intellectual property and in people, as in intellectual property. For example, you can imagine that the French, if they were in a bad mood, might choose to drag their feet, because in consequence they would be able to take a monopoly of fuel retreatment from Japan, which currently sends some to the UK and some to France. Who is to know that that will not happen? The European Union will not see us as friends and will not seek to bend over backwards to find accommodation for a nuclear co-operation agreement. It is probably going to be a very slow and difficult arrangement.

One thing that needs to be in place to achieve any progress is a safeguards arrangement that is at least as good as Euratom’s. Currently, the Bill as drafted insinuates that there is a window for it to be less than Euratom, because it goes to IAEA rather than Euratom guidance. Hence the words that we are offering for someone to propose as an amendment, so that in those negotiations you can say, hand on heart, that there will be no dilution, and therefore no commercial advantage to the UK, as a result of our having a domestic safeguards arrangement rather than a Euratom safeguards arrangement.

Tom Greatrex: Let me add that if, as has been stated, the Government’s intention is to replicate the Euratom standards and arrangements, you will have heard from the ONR earlier that it will not be possible to implement that at the end of March 2019. That is the crux of the industry’s concern about there being sufficient time to enable the new UK regime to be in place. The Bill does just the very first part of enabling that to start to happen. It does not solve the issue; there are a whole range of things that have to happen as a consequence of the Bill and other remits that need to be struck, which is why people are concerned about a very real-time pressure.

Jonathan Leech: The very first step would be to make absolutely certain that the Bill gives the power to create the regulatory regime that is equivalent to Euratom. The second step, which needs to follow that very closely, is to ensure, by whatever means necessary, that ONR is given the resource to do what needs to be done, so that we do not face any hiatus, if indeed that is possible.

Rupert Cowan: In the safeguards regime.

Jonathan Leech: Yes, in the safeguards regime.

Rupert Cowan: Which then allows the discussions to go forward from a position of fairness and honesty: that we are not trying to dilute or change the obligations we have under Euratom, which is what others might suspect.

Jonathan Leech: When you have both of those things, you can go and speak to counterparties to the co-operation agreements you need and say, “This is what we are doing. We can lay it out on the table for you. This is the investment we are making and these are the regulations we will have in place.” If we cannot do that, they simply will not take us seriously.

Q37 Dr Whitehead: The Bill, as we have heard and as you have set out this morning, is very much an enabling Bill. As the Bill stands, the process of getting us to where we need to be by March 2019 is entirely in the hands of secondary legislation, which does what secondary legislation does and is accountable in the way that secondary legislation is. One of my concerns is the extent to which the Bill therefore places in the hands of somebody—obviously, present company are entirely absolved from this criticism—the ability to do the various things to get us to that position by March 2019 but without further reference to Parliament. Do you have any views on the legal position relating to that, and on whether Parliament ought to have some kind of scrutiny role to ensure that we do get to that position by March 2019, bearing in mind that the current arrangements in the Bill appear not to allow that to happen?

Jonathan Leech: As a matter of general political process, yes, there needs to be scrutiny so that these regulations are developed now—not over the next two years, but over the next month—so that we are then in a position to take the steps that follow. In terms of the broader position, if what we are seeking to do is to replicate and preserve what is, at the moment, effectively EU regulation, then that is but one of many areas where a similar approach may be taken. It is a little more complex here because you have to untangle it from the resource of Euratom and the enforcement processes and the ECJ jurisdiction. Nevertheless, if the statement is that it is to replicate, then the objective should be just that.

In terms of the fine detail of the regulation, it is an intensely technical thing, and some sort of secondary legislation is probably the right place for it. My biggest concern would be around scrutiny of the timetable to ensure that it is not delayed in any way that will jeopardise our position at the end of the two-year process.

Tom Greatrex: I would have thought that, as Members of Parliament, you would want to be satisfied and confident that everything is in place in the timeframe in which it needs to be in place. It is obviously open to you to seek to amend the Bill in order to put that to the test.

A subsequent related point is that the industry also thinks that it is important that the Bill could be amended to ensure that the nuclear sector is consulted on the detail of that new regulation. You have to bear in mind that there will be people who will need to make sure that they can comply with that regulation, so understanding its content is vital. Getting that right—given the timeframe and the time pressures we face—is going to be critical. So there is another route to pursue to ensure not only that Parliament is satisfied, but that the industry has an opportunity to be consulted on the detail of that new regulation so that it is right first time.

Jonathan Leech: In a sense what is needed is the highest degree of openness and the widest consultation possible in the development of that regulation.

Q38 Dr Whitehead: On a scale of one to 10, how much of a scare story position is there on what would happen to the nuclear industry if we do not have those arrangements in place by March 2019, or if we do not
We can take a practical example. Because of the international nature of the nuclear industry, the Sizewell reactor currently generating power in Suffolk is based on Westinghouse technology. That technology is therefore US technology. Because of the legal requirement to have a nuclear co-operation agreement in place, there are very real—these are not scare stories—and legitimate concerns that even the ability to exchange information between the operators of the site, EDF and where the technology originates from will potentially be illegal at the point when we come out of Euratom, if we do not have successor arrangements in place or a period of time to enable the transition to be finalised and for the new regime to be put in the place.

It is not about being against the Bill. The Bill does the first step, but there are many more subsequent steps that have to be taken. The ability to do that in a very limited timeframe is the cause of the majority of the concern.

**The Chair:** We will discuss that in this room when we are considering subsequent Bills, no doubt.

**Q41 Trudy Harrison:** I am hearing that the legislation should be descriptive of Euratom—almost a cut-and-paste job. That differs from the way that ONR currently deals with safety and security, which is outcome-based. While ONR has responsibility for safety and regulates for security, do you see benefits in ONR also having responsibility for safeguarding? Could there be cost or knowledge and skills benefits in ONR having all three strands of the nuclear industry in one building and within one organisation?

**Tom Greatrex:** The question is probably better addressed to the ONR, but I think the skillsets that would give the ability to move between those different things may be limited to some extent. However, as you heard earlier, it is not unusual for domestic regulators to have responsibilities for safeguarding inspection. That happens in a number of different countries already, but Euratom effectively does that on our behalf. I do not think that in itself is particularly an issue. It is about the process of being able to move from the current situation to the new one.

In the fullness of time, if we get all these arrangements in place and there is not an interruption, and all those concerns are addressed, I do not think there is anything to suggest that the ONR would not be fully capable of doing this alongside the other things it is currently required to do. I am not sure to what extent there would be the economies of scale benefits that you suggest, because the skills involved in safeguarding inspections are quite different from assessing new reactor designs or the routine safety inspections that happen at sites around the country, such as Sellafield and others.

**Q42 Trudy Harrison:** I am going to come back to the waste issue. I understand that we have waste from the United States and also, I think, from Tokaimura in Japan at Sellafield. What would happen to that waste—waste owned by either other countries or Euratom—if we do not get this in place?

**Rupert Cowan:** They rub their hands with glee and say, “You keep it; your problem.”

**Trudy Harrison:** But it already is our problem.

**Rupert Cowan:** No, because it goes back to Japan when it has been re-cleaned. They will just say it is our problem, and that they cannot take it because they are

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[Dr Whitehead]

have a transition period in which we could get those arrangements in place on a more leisurely basis? Some stories have been circulating that the nuclear industry will essentially cease to function, when it comes to the transfer of fissile material, supply chains and so on. Do you take that completely seriously or partly seriously, or are you not worried about it at all?

**Rupert Cowan:** Completely seriously. The reason for that is that each of the counterparties with whom we trade in fissile material, components, or anything else listed as sensitive and nuclear, have their own international treaty obligations. One of those obligations is that they should not trade with people who do not have safeguard arrangements in place that are at least equal to the IAEA safeguards. Unless that is complete and in place, we will not trade, and so they will not be able to continue business with us—full stop. If any members will be participating tomorrow in the Business, Energy and Industrial Strategy Committee on the economic implications of the functioning of the industry as it currently functions and has functioned for the past 40 years or more.

**The Chair:** I am keen to move on. Minister.

**Q39 Richard Harrington:** Thank you, Mr Cowan, Mr Leech and Tom, for your support for the Bill. Everything you have said is the reason why we are introducing the Bill, and I thank you very much for your support for it. I have read your opinions and amendments and have taken them into consideration. Thank you very much for the work that you have done. Please do not think that the evidence that you have given is taken lightly, but I must underpin that by confirming your answer to a previous question, which was that you do support the Bill. I accept fully the reasons why you do.

**Rupert Cowan:** We support the Bill completely. We suggest the amendments for the reasons described.

**Q40 Paul Blomfield:** I want to explore the concerns about the gap between the existing safeguarding regime and that envisaged by the Bill. Dr Golshan said that the new regime that she was seeking to establish would not replicate the functions undertaken by Euratom in relation to safeguarding. I am also conscious that the NIA’s evidence talked about the importance of leaving without any gap, but that you were worried about the gaps provided. I wonder whether you could elaborate on that a little more, Tom.

**Tom Greatrex:** As the ONR said earlier this morning, it will not be possible to replicate the safeguarding regime on day one. If the Government have said that they intend to replicate the standards that we currently have as a member of Euratom, there is obviously a concern that we will not be in the position where we will be meeting the same standards at the point at which we leave Euratom. That is the crucial point about the need for a transitional arrangement or parallel working—there are different ways of describing what is broadly the same thing—which is to avoid that gap.

If you do not have the correct arrangements in place, as you have heard from others on the panel, the series of other arrangements that are effectively contingent on the safeguarding regime will not be able to be in place. That is why it affects absolutely everything to do with the functioning of the industry as it currently functions and has functioned for the past 40 years or more.
not allowed to. You should not get the impression from what we are saying that we are in any way opposed to the Bill. It is probably correct that, ultimately, ONR being responsible for safeguarding is a positive outcome. It is the disruption that frightens us. That disruption is not a scare story, it is a very real possibility in terms of electricity generation and the ownership, safeguarding and storage of spent fuels, which would be going back to their home base—or not, depending on the particular arrangement; it is all going to stop if we do not get this organised. That is the danger.

I am not saying that we will not have resolved it in 10 years’ time, but the next two or three years look pretty bleak. That is the worry.

Jonathan Leech: We have to keep in mind that international nuclear trade depends upon international acceptability; it is very much a compliance-driven culture. It is not the case that there is a fall-back that might involve a higher tariff or whatever; it would simply be unlawful, so it would simply stop until such time as we have resolved the impasse.

The Chair: We are testing the edges of the Bill. Maybe because I want to say “sir”, I call Sir Robert Symns.

Q43 Sir Robert Symns: May I ask you this, Mr Leech? You are saying that this is a good first start, but the key thing is the regulations. From your point of view, would you would like to see as many of the regulations published as early as possible, so that you can see the overarching regulatory regime, which would build confidence for the industry?

Jonathan Leech: Correct. We should see those published as soon as possible and consulted on as widely and as soon as possible. That should happen alongside the development of the resource to deliver them.

Sir Robert Symns: Good.

The Chair: I am being fairly relaxed, but I want to bring it back to what is in the Bill, rather than what is not. With that in mind, I call Dr Whitehead.

Q44 Dr Whitehead: What is in the Bill is, among other things in the schedule, some possible route by which nuclear inspection might be made compatible with what the process of safeguarding inspection consists of, so far as what those Euratom inspectors who undertake it in this country on behalf of Euratom do. In the Energy Act 2013, there is a substantial appendix that sets out in detail the responsibilities, powers and intervention arrangements of nuclear inspectors for the whole nuclear industry, except for safeguarding, which is specifically removed from inspectors’ responsibilities by that piece of legislation. What would be necessary to make sure that those powers in the 2013 Act for nuclear inspectors are mirrored exactly, to integrate what the Euratom inspectors did and what UK inspectors would be required to do in the future?

Jonathan Leech: You are right into the detail of the technical regulation there. The first thing is that you need to expand the scope of those powers within the legislation, and the Bill seeks to do that. Then you need the regulation to set out exactly what is to be done, how and where, and take into account the point, which we have not really gone into, about the outcomes-based approach that the rest of our domestic nuclear regulation is based on. That will present a challenge in transcribing the regulations for use in UK law. We are probably straying from the Bill there. However, provided that we set out in the Bill an expansion of those enforcement powers, which will be an essential component of the expansion of ONR’s role, we are starting to put in place what we need to have. We need the regulation to go with it.

Q45 Dr Whitehead: Would it be necessary, for example, to bring into the Bill the entire range of powers and intervention possibilities that inspectors have, to ensure that they are identical to those that would have been undertaken by Euratom inspectors? Or would it be necessary perhaps just to switch off those bits of the 2013 Act that meant that inspectors could not inspect and issue prohibition notices and other things relating to nuclear safeguarding, whereas they could do everything else? Is it the case that, in the 2013 Act, there are sufficient powers for those inspectors simply by turning off what they are not able to do, to enable them to do what they need to as far as a successor regime to Euratom is concerned?

Jonathan Leech: In terms of how it is presented, I suggest that it is preferable to have our law on this matter collected together in one place and so to proceed by amendment, rather than by replication. If we create a whole new regime in the Bill, then we introduce the possibility of discrepancies between two similar but possibly slightly different regimes, that is generally unhelpful. To proceed by amendment to and expansion of the Energy Act 2013 is probably the right way to go.

Rupert Cowan: I see the people who are negotiating the nuclear co-operation agreements. They want to be able to refer to a clear set of guidelines, which is clearly at least as effective in safeguarding, and therefore allowing the counterparty to fulfil its international obligation, as the existing Euratom system. It needs to be easily referable to, so that you can sell it and get your deal as quickly as possible, without them taking points about the way your safeguards are drafted or presented. That should be very much in the minds of the draftsmen—that there is a commercial and pressing need to get this agreed with seven or eight foreign jurisdictions as quickly as possible, some of whom will be willing, and some of whom will be less willing, to agree your safeguards regime as adequate to fulfil their obligations. It needs to be clear, clean and saleable. That is the secondary legislation that follows from the Bill, which is why we have suggested only one amendment. The objective of the amendment is to do that, so you can go and talk to somebody in Korea or the United States and say, “This works”, and they cannot see a reason quickly why it should not. You are resourced, the regulations are clear, they apply and you can have your discussion over in months, rather than years.

The Chair: My instinct is that the Committee has found your evidence extremely useful. Unless there are any further questions, I thank you all for your extremely helpful, useful, well-informed and wide-ranging evidence. We are most grateful to you.

Ordered, That further consideration be now adjourned. — (Rebecca Harris.)

10.45 am

Adjourned till this day at Two o’clock.
Public Bill Committee

NUCLEAR SAFEGUARDS BILL

Second Sitting
Tuesday 31 October 2017
(Afternoon)

CONTENTS
Written evidence reported to the House.
Examination of Witnesses.
Adjourned till Thursday 2 November at half-past Eleven o’clock.
No proofs can be supplied. Corrections that Members suggest for the final version of the report should be clearly marked in a copy of the report—not telephoned—and must be received in the Editor’s Room, House of Commons,

not later than

Saturday 4 November 2017
The Committee consisted of the following Members:

*Chairs*: † James Gray, Steve McCabe

† Blomfield, Paul (Sheffield Central) (Lab)
† Bradley, Ben (Mansfield) (Con)
† Carden, Dan (Liverpool, Walton) (Lab)
† Debbonaire, Thangam (Bristol West) (Lab)
Gibson, Patricia (North Ayrshire and Arran) (SNP)
† Gill, Preet Kaur (Birmingham, Edgbaston) (Lab/Co-op)
† Harrington, Richard (Parliamentary Under-Secretary of State for Business, Energy and Industrial Strategy)
† Harris, Rebecca (Castle Point) (Con)
† Harrison, Trudy (Copeland) (Con)
† Hendry, Drew (Inverness, Nairn, Badenoch and Strathspey) (SNP)
† Lewer, Andrew (Northampton South) (Con)
† Maclean, Rachel (Redditch) (Con)
† Norris, Alex (Nottingham North) (Lab/Co-op)
† Robinson, Mary (Cheadle) (Con)
† Sunak, Rishi (Richmond (Yorks)) (Con)
† Syms, Sir Robert (Poole) (Con)
† Whitehead, Dr Alan (Southampton, Test) (Lab)
† Wragg, Mr William (Hazel Grove) (Con)

† attended the Committee

Kenneth Fox, Rob Cope, Committee Clerks

Witnesses

Angela Hepworth, Corporate Policy and Regulations Director, EDF Energy

Sue Ferns, Deputy General Secretary, Prospect

Kevin Coyne, National Officer for the Energy & Utilities Sector, Unite the Union

Professor Juan Matthews, Visiting Professor, Dalton Nuclear Institute
Public Bill Committee

Tuesday 31 October 2017

(Afternoon)

[JAMES GRAY in the Chair]

Nuclear Safeguards Bill

Written evidence to be reported to the House

NS 01 Prospect
NS 02 Professor R J Barry Jones
NS 03 Nuclear Industry Association

Examination of Witness

Angela Hepworth gave evidence.

2 pm

The Chair: I welcome our witness for the first session this afternoon, which can last for half an hour. Angela Hepworth is the corporate policy and regulation director at EDF. Perhaps, for the record, you would be kind enough to introduce yourself. If you want to say anything about the Bill by way of introductory remarks, please do so.

Angela Hepworth: I am Angela Hepworth. I am the corporate policy and regulation director for EDF Energy. I look after our interaction with Government and with regulators in the UK, and I am also managing the company’s work on Brexit, and in particular Euratom.

Q46 The Parliamentary Under-Secretary of State for Business, Energy and Industrial Strategy (Richard Harrington): Good afternoon, Angela. I would like to ask you a general question, if I may. Do you agree that a nuclear safeguards Bill is an essential step for the UK in preparing for its exit from Euratom?

Angela Hepworth: I do agree. Maybe I can say something about our industrial perspective and what it means to us in the UK.

As I am sure you know, we own and operate the eight existing nuclear power stations in the UK, which provide 20% of the UK’s electricity-generating capacity. We also have plans to build a new nuclear power station at Hinkley Point C and then follow-on nuclear power stations. As part of that, it is vital for the existing nuclear fleet and for our new build projects that we are able to import fuel, components, services and information for the nuclear power stations. That is absolutely essential. We have a supply chain that depends on having access to those things from Europe and further afield.

In order to do that, it is essential that there is a functioning safeguards regime in place that is approved by the International Atomic Energy Agency. At the moment, as you know, that is provided by Euratom. When Euratom is no longer providing that, it is essential that we have a domestic regime that will support our ability to import those things. We see it as essential to have a safeguarding regime and therefore essential to have the Bill, to give the necessary powers to put that regime in place.

Q47 Alex Norris (Nottingham North) (Lab/Co-op): Obviously EDF works beyond our borders. If your business ends up having to work across multiple safeguarding regimes, what likely complications will that cause for you? Do you do that already?

Angela Hepworth: In terms of our UK operations, we will be operating within a UK safeguarding regime. We understand that the Government’s intention is to keep the arrangements from an industry perspective quite similar to the existing arrangements that apply with Euratom. The Bill provides powers to put that regime in place. We have not seen the detail of how those arrangements will operate, but we are very keen to. We are happy, in principle, working under a domestic safeguards regime in the UK, as we have been happy working under a Euratom safeguards regime.

Q48 Mary Robinson (Cheadle) (Con): What do you see as the biggest risks to the industry of leaving Euratom?

Angela Hepworth: On the safeguards regime first, our concern is about the amount that has to be done to have the safeguarding regime in place in time. As I say, in principle we are very happy with the idea that a domestic regime should be established, rather than the Euratom safeguards regime, but we are conscious that there is a lot to do in the time available to get that regime in place. It is not the principle of it; it is the timing and the implementation.

Likewise, we are conscious that the other key components that we need to have in place include a replacement agreement with Euratom, which would cover issues relating to the ownership of nuclear material, and our future trading relations with Europe for nuclear materials. Obviously, that is subject to the negotiations that are going on in Brussels at the moment. I have regular contact with the officials who are leading those negotiations, and we are fully aligned with the objectives they are pursuing. Again, it is subject to the success of those negotiations.

There are other key things that have to be put in place. We will need nuclear co-operation agreements with key third countries. I have been told that the negotiations are under way and are progressing well. Again, our concern is the timing and how it fits with the timing of putting a safeguards regime in place. Those agreements cannot be finalised until there is certainty about the domestic safeguards regime, so it is about the timing of getting all of that done.

The other key issue for us is the movement of people. We are an international business, and the nuclear industry is an international industry. We rely on having access to experts from Europe and further afield. The roles in the company that most draw on skills from overseas are engineering roles—we are reliant on being able to draw in engineers. Building Hinkley Point will require a workforce of 25,000 people. We are doing an awful lot to try to build up skills in the UK, but we expect that, to deliver Hinkley, we will need to be able to draw on workers from overseas. I would not expect that to be solved within the Euratom arena, but that is a key issue for us as a nuclear operator.
We also have to ensure that we have got an export control regime in place and support for nuclear R and D. Those are the key issues for us relating to Euratom.

**Dr Alan Whitehead** (Southampton, Test) (Lab): May I ask you about the Euratom costs relating to safeguarding, which may not go to Euratom but to the Office for Nuclear Regulation as a result of the transfer of responsibility for safeguarding from Euratom to ONR? I understand that EDF Energy already pays into ONR as a contribution to its general costs, but does not pay anything to Euratom for safeguarding. Is that right?

**Angela Hepworth**: That is right. We have to distinguish what we pay for from the ONR at the moment. As a nuclear operator, we are required to comply with certain safety and security regulations, and we pay for the ONR’s role in inspecting our stations to ensure we comply with our obligations. That is absolutely right, and we expect that to continue. There is a distinction to be drawn between that and compliance with the safeguarding regime, which is the responsibility of a member state. At the moment, the UK Government pays for that to be done via its contributions to the EU budget. As that is a member state responsibility, it is clear to us that it should be the UK Government who meet those costs in the future, rather than look to the industry to cover them.

Q49 Dr Whitehead: At present, the UK Government’s responsibility is absorbed into the £14 billion per annum net rebate that goes to the annual overall EU budget.

**Angela Hepworth**: As I understand it, it is funded via the EU budget contribution. That is how it is funded at the moment.

Q50 Dr Whitehead: So, given the fact that it will be a contribution to ONR in the future for that new purpose, which, as we have heard, will require additional inspectors and other things, you would anticipate, or hope, that it would be separated out in practice among the various moneys that go to ONR generally at the moment.

**Angela Hepworth**: I think the cost should be met by the UK Government, given that it is discharging a UK Government responsibility.

Q51 Dr Whitehead: Do you think that that separation out ought to be in legislation? Obviously, in this Bill we are trying to make sure we have got absolutely everything right, as far as transition is concerned. Is that something you think can be dealt with by discussion, or do you think it perhaps ought to be laid down?

**Angela Hepworth**: I think we would welcome the assurance: whether that is provided on the face of the Bill or separately is less of a concern to us.

Q52 Rachel Maclean (Redditch) (Con): You mentioned some of the things that need to happen after the Bill is introduced to make sure that we have a safeguarding regime for the UK. Can you prioritise those for us, once the Bill has been introduced?

**Angela Hepworth**: It would be first and foremost the responsibility of the ONR to put the safeguarding arrangements in place—if that is the element that you are particularly concerned about. I know that one of the early activities they are undertaking is recruitment of the experts that they need in order to do that. They need to be able to do that and to put in place the processes and systems that they need to be able to discharge those responsibilities. What we would welcome as an operator is a timetable from the Government and the ONR that sets out exactly what steps need to be taken and when, in order to have a regime operational at the point where the UK leaves Euratom.

Q53 Drew Hendry (Inverness, Nairn, Badenoch and Strathspey) (SNP): You laid out your concerns about the pace and timescale for the replacement requirements for leaving Euratom. You said there was a lot to be done to discover what ownership details were there, their future trading relationships and the nuclear co-operation agreements with third parties and, obviously, workers from the EU. Assuming a date of leaving Euratom of March 2019, when is the latest date that you would say would be required for you to have clarity on those agreements going forward?

**Angela Hepworth**: I think it is really a process of increasing confidence. It is not so much that there is a particular date where you need to have everything signed and sealed, but we need to have a process between now and the exit date where we have confidence about the regime that will be in place at that date. We would very much support having a transitional or implementation phase, with as much continuity in the existing arrangements as possible. If that could be confirmed early, that would be a great benefit to the nuclear industry, to give them the confidence that they will have continuity in the existing arrangements for a period after the exit date.

Q54 Drew Hendry: So first of all, give them that confirmation of continuity, and also how long would you like to see that transition period last?

**Angela Hepworth**: I do not think that is a question I can answer. We would like a period of transition. I think that is probably a question for the Government—what they think is appropriate in the circumstances, given what needs to be done within that timeframe.

**Drew Hendry**: I am surprised that you do not have an idea of what you might require as part of the industry—that you might not have an idea of how long you might need as a run-in time to adjust to new regulations.

**Angela Hepworth**: I think it is more a question of understanding the timeline from the Government and the ONR that they need to have these arrangements in place. Speaking from an industry perspective, we welcome certainty and stability. An early signal that there would be a period of continuity after the Euratom exit date where the arrangements for trade would continue to apply would be very reassuring.

Q55 Trudy Harrison (Copeland) (Con): To declare my interest, my husband and various other family members work at Sellafield in my constituency of Copeland. I have heard loud and clear that there is a need for a critical path for us all to have sight of, to understand how this process is running, and also the transition period. I think it would be helpful to understand what outcomes we would need from that transition period from other countries outwith Europe, but also for us to
understand how it is necessary for other countries to have this in place. How do other countries rely upon the UK to continue with their business in the nuclear industry?

Angela Hepworth: If we are thinking about countries outside the EU, there are a number of countries where it is either illegal or a policy requirement that they have a nuclear co-operation agreement in place if they are going to export nuclear material. The countries that the UK Government have rightly prioritised for negotiating agreements are the US, Canada, Japan and Australia. In each case the UK Government will need to negotiate a nuclear co-operation agreement with that country to enable the trade.

Why does it matter? For example, our Sizewell B power station relies on Westinghouse technology, so we rely on our links with the US in order to be able to operate and maintain that power station. If we wanted to import a part from America, or to draw on expertise and services from America for that power station, there has to be a nuclear co-operation agreement in place between the UK and the US in order to do that. As we understand it, the US will not agree a nuclear co-operation agreement unless the UK has a safeguards regime in place, which is one reason we see the Nuclear Safeguards Bill as a key priority, to put that in place. Each of those countries will have its own internal processes in order to agree nuclear co-operation agreements.

As I understand it, for example, in the US it will have to be agreed by the President and it will have to go through Congress. We have been telling Government we would like to see, as an industry, a timeline that sets out for our benefit the steps that need to be taken in order to put a safeguards regime in place, to get it approved by the IAEA, to conclude the negotiations with third countries, but also the ratification processes for those countries, in order to understand the end-to-end process and how those various components interact, so that we can have the safeguards regime in place and also the nuclear co-operation agreements with those third countries. Then, as I said, we need a future agreement with Euratom: there needs to be an agreement in place, negotiated between the UK and Euratom, which explains the framework for nuclear trade going forward once we have left Euratom.

Q56 Trudy Harrison: We have heard examples of how we need it; are there examples of why other countries need it in place, for their own benefit?

Angela Hepworth: Yes; there is a nuclear supply chain across the EU and the UK is a great opportunity for those countries. For example, two-thirds of the value of the construction of Hinkley Point will go to companies in the UK but that leaves one-third of the value of the construction going to countries from further afield. Many of those are companies in Europe but, for example, there are companies in the US and Japan which are also involved in the Hinkley Point supply chain. It is in the interests of those companies and countries to have future co-operation agreements which enable them to participate in the supply chain. The UK has great opportunities for international companies: there is supporting the operation of the existing nuclear fleet; there is the nuclear new build programme; there is decommissioning coming up. So there should be real opportunities for other companies to be involved in the UK supply chain if we can get those agreements in place.

Q57 Paul Blomfield (Sheffield Central) (Lab): On the same theme, in your evidence you very diplomatically describe the challenge that we face, even if the Bill proceeds in a timely manner. The legal and practical challenges to the Government and the ONR to put the necessary arrangements and resources in place remain significant. I guess that what you are trying to say, in code, is that that is not really very doable by March 2019.

Angela Hepworth: I am not saying it is not doable; I am saying it is challenging. You heard first-hand from Dr Mina Golshan of the ONR this morning about the practical steps that need to be taken. There is an awful lot that it needs to do in terms of recruitment and having systems and processes set up. We are mindful of the fact that that is a challenge in the time available. That is one reason we support an implementation or transitional phase.

Q58 Paul Blomfield: You would find it helpful to have that in the Bill?

Angela Hepworth: Again, we are looking for assurance and clarity. I am less concerned about whether that is set out in the Bill or not; it is assurance and clarity that the industry is looking for.

Q59 Dr Whitehead: From the point of view of EDF’s operations across the world, what is your view on whether, and in what form, association with Euratom might be a reasonable proposition for the future, and on whether the associations already in existence might fit the bill as possible models for UK association with Euratom?

Angela Hepworth: In terms of a future relationship, EDF Energy has been clear from the outset that far and away the best outcome for the UK nuclear industry would be to remain in Euratom. That remains, we think, the right answer for the UK nuclear industry. Assuming that is not possible and that we have to look at a future agreement, the models of association agreements in place now are limited to engagement in research and development programmes. That is valuable, but it does not address the key issue that we are concerned about, which is the movement of nuclear materials. What we are most concerned about in all of this is our ability to move nuclear fuel, nuclear components, information and services. The current framework of association agreements would not meet that need. If that were going to solve the key issues, we would need to think of some different model of association.

Q60 Preet Kaur Gill (Birmingham, Edgbaston) (Lab/Co-op): You say under “Issues to be addressed”:

“Neither EDF nor the wider UK nuclear industry are... included as statutory consultees”.

You also say that if there were any changes or amendments to regulation, “Neither EDF nor the wider UK nuclear industry are... included as statutory consultees”.

Do you think that the current consultees include the wider sector, or are they quite limited?
Angela Hepworth: As I understand it, the Bill says that the ONR and such other people as are deemed appropriate must be consulted. We would welcome consultation with the broader nuclear industry.

The Chair: Unless there are any other questions from colleagues, I will say thank you very much indeed for your time. You have been extremely helpful and clear, and have added a lot to our deliberations over the next couple of weeks.

Examination of Witnesses

Sue Ferns and Kevin Coyne gave evidence.

2.22 pm

Q61 The Chair: I welcome Sue Ferns, Deputy General Secretary of Prospect Union, and Kevin Coyne, National Officer for the Energy and Utilities Sector at Unite the Union. Having introduced you, I will now the less ask you to introduce yourselves for the record and, if you wish, say a word or two in general about the Bill.

Sue Ferns: I am Sue Ferns. I work for Prospect, a politically independent trade union representing thousands of members across the nuclear industry, from research to generation and decommissioning. We also represent members who work at the Joint European Torus facility in Culham.

We have set out our key concerns about the Bill, one of which is to ensure that the powers of the inspectors are included in Bill, consistent with the Health and Safety at Work Act 1974 and the Energy Act 2013. We would also like to see in the Bill a consultation on what associate membership of Euratom would look like, because we feel that that would be better than exiting Euratom. From the discussion that has just taken place I understand, and agree, that there is no off-the-peg answer to that, and that we would have to write something specifically for the UK’s circumstances. Those are a couple of our key concerns.

Q62 The Chair: Before I ask Mr Coyne, I will just pick up on that particular point. We are restricted by parliamentary procedure to discussing what is in the Bill. Associate membership of Euratom is not, and therefore we are not permitted to discuss it even should we wish to do so. We must discuss only what is in the Bill and not what, presumably, we would have liked to be in it.

Kevin Coyne: What a pity. I am Kevin Coyne, national officer for Unite. Unite represents skilled workers in the nuclear industry, from decommissioning and generation to huge swathes of the electricity industry. Our position on the Bill, and I understand that you will be asking supplementary questions about whether we support it, is that we have concerns, principally about the impact on workers in the industry, as you would expect from us. We also have concerns about the timescale, and whether that will be in place and have ramifications for jobs in the future. We have concerns about JET in particular, the jobs based at JET, and the freedom of movement of those jobs throughout Europe and the attention to detail in the Bill about that. Those are our three main concerns.

Richard Harrington: Welcome this afternoon. I accept your point, Kevin, and the Chair has quite rightly ruled about our discussing what is in the Bill, but my door is always open to both you and Sue to discuss other matters on another occasion.

Kevin Coyne: That is very kind of you.

Q63 Richard Harrington: I know you know that, but I wanted to confirm it, although it is not relevant to this afternoon's session.

I would like to ask you a leading question—something which of course we do. I understand your views on Euratom and what Sue said about associate membership. She is quite right that there is no actual definition of associate membership. However, given that the Government decided to serve the article 50 notice on Euratom and we are leaving subject to negotiations, which is a statement of fact, would you accept that we are doing the right thing in having nuclear safeguards built? I accept that you do not think that the Bill covers everything, but would you still support it?

Kevin Coyne: The important point is that there is a safeguarding mechanism in place by 2019. You have seen my paper, in which we indicate as a union that we wished that Euratom had been left in place for a series of reasons, including the continuity of various bits at a high level. We do not believe that we can hope to progress to that level by 2019, so we believe that the safeguarding mechanisms outlined in the Bill are important to safeguard the industry as it goes into a phase which we do not yet know about.

Sue Ferns: Just to add to that, having read the Second Reading debate, there was a lot of talk about this being a contingency measure. I would agree; it is an essential contingency measure. It is not our first preference, but it needs to be there as a contingency.

The Chair: I call shadow Minister, Dr Alan Whitehead.

Q64 Dr Whitehead: I think it was made clear verbally on Second Reading that the Bill is certainly intended to be a contingency measure—a Bill that would come into operation only if having any other arrangement following Euratom proved not to be possible. I imagine that is what is meant by contingency.

I wonder if you might briefly share with us what you think might be possible so that the Bill is not a contingency, and whether you think the timescale that we have in front of us over the next period is sufficient to bring in either associate membership, perhaps, or similar arrangements with Euratom. Alternatively, if the Bill is to be used as a contingency, do you think that the timescale in front of us—bearing in mind all the detail of the secondary legislation that we need to get through as far as the Bill is concerned—will be sufficient to make that happen?

Sue Ferns: I think the answer is that we do not feel confident that the timescale is sufficient. From speaking to members in the ONR who essentially have to deliver the key provisions of the Bill, it is clear that they need to build an IT system to log the data properly. They need to have resources to deliver what is required, bearing in mind that we are a heavy utiliser of Euratom resources in the UK. As the previous witness said, we need to make sure that there are inspectors in place to be able to police the regime.
It is easy to say that; it is much more difficult to deliver it. Nuclear inspectors are thin on the ground at the best of times. Absolutely, ONR is doing its very best to try to ensure that it can expand its inspector resources, but I think even ONR feels that it is a challenge. The question is where will these people come from? The only obvious source is from elsewhere in the industry, because there are not qualified nuclear inspectors who are currently out of the labour market. That is absolutely a major challenge. The honest answer to the question is that I do not know whether the timescale is sufficient, but at this stage we certainly do not feel confident about it.

Kevin Coyne: I would answer that question with two responses. First, as I said, we as a union hoped that we would have remained in Euratom. We do that because we believe there is not a necessity to leave Euratom in effecting Brexit under article 50 and through article 160a. It was possible, I understand, to remain. That is important, because of the uncertainty that we now believe is cast over that.

As I said before, our concern is mainly with our members’ interests and with jobs. Sizewell B, for instance, will be in operation until 2034, and it relies extensively on components from the United States. It is very important that the co-operation agreements that the previous witness talked about are in place by 2019, and there must be serious doubt with the inspectorate in its current state. I believe that the numbers are 160 inspectors, and the ONR has fewer than 10 in place currently. So, there is the training and the programme and—importantly—all of that must cast doubt upon our ability, and if that is the case it will affect the smooth operation of nuclear plants in future, until there is a regime in place that equally matches the plants.

Secondly, I would argue that there is an impact on new nuclear development for the regime. For instance, there is the whole fuel cycle in Britain, which is gearing up to be a serious and important new operator of new nuclear build. We want within that the whole fuel cycle—the whole of the nuclear operation. As you know, in Preston we have a factory—Springfields—that produces fuel, which is wholly dependent on mixed fuels from other nations, co-operation agreements and the operation of Euratom in ensuring that that fuel supply is there and available.

There is a real threat, because of the problems with Westinghouse, that that plant in Preston would suffer as a result of the safeguards not being in place in time. That would result not only in the loss of jobs but in issues for the fuel cycle itself, for Britain’s ability to recreate the whole of the nuclear cycle for the export orders for the industry, and for the jobs that that entails.

Q65 Eleanor Smith (Wolverhampton South West) (Lab): I noted that you talked about training and wanting personnel to do work. How long would these individuals need for training?

Kevin Coyne: I will defer to my colleague, who is from the union that represents these people.

Sue Ferns: How long to train a nuclear inspector?

Q66 Eleanor Smith: Yes, and other people you require, because you said there are numbers that you need. I just wondered how long training would take.

Sue Ferns: It takes quite a number of years to train a nuclear inspector. Obviously, if you get people from the industry, they have a level of experience, but not in that context. I believe that ONR is considering whether it can provide additional training to some of its other staff, to enable them to take this role. They are people who inspect, but don’t inspect for safeguarding. However, none of that happens overnight. This is a highly skilled, very specialist area, which is why there is such a premium on this source of labour, so it will take a period of time to be able to do that.

Kevin Coyne: The reputation of the UK nuclear industry and its attendant skills and safety record are things that we, including the trade unions, are very proud of. I would argue that it is important that Euratom inspectors are highly regarded and renowned throughout the world, but that takes time. It is very important to have that reputation, so that people in the rest of the world believe the reports and the regulations that emanate from that.

Q67 Trudy Harrison: I absolutely share your pride in our nuclear industry, and I am certainly looking forward to the future. In terms of the expertise that we already have in this country, my constituency alone has 14,500 Nuclear Industry Association members and 10,000 staff working at Sellafield, many with the skills to lend themselves to being nuclear inspectors. Indeed, the 17 Nuclear Decommissioning Authority sites across Britain are already compliant, which means that they must have staff in place to ensure that compliance, regardless of inspection. Sue, you mentioned not being confident, but what specific steps should we take to provide that confidence?

Sue Ferns: I think that there are a couple of things. First, as the previous witness said, there should be a clearer timetable for various steps. At the moment there is a deadline and then there are two years. How will we get there? The path is unclear.

Q68 Trudy Harrison: So that critical path when there is project management talk about with what steps need to be taken on what date and by whom.

Sue Ferns: Indeed, and what the risks are at each stage, so that they can be known and are transparent. I am sure that various stakeholders are working on them at the moment, but I do not think that the critical path with the risks at each stage is a transparent timeline at the moment.

Another thing that would build confidence is making it clear that everyone will work to achieve this, but if we do not achieve it, we must have a longer transition period. For the sake of the industry, we absolutely cannot afford to step out of the regime that we have now until it is absolutely clear that there are equivalent standards in place and that they are operating. It is quite difficult to impose an arbitrary timescale on that because, as I said, there are a number of risk factors: specifying, procuring and getting new IT systems up and running—there is not always a great track record on that—and making sure that we have appropriately qualified and skilled inspectors.

Reflecting on the previous question, Kevin is absolutely right: the UK has a first-class reputation. We all know how easily reputations can be lost. They take years to win, but they do not take years to lose. There should be a combination of having the critical path, which is transparent about the risks at each stage, and being clear that if we need a longer transition in this sphere, we should have a longer transition because that is in the interests of the industry.
Q69 Paul Blomfield: I want to pursue the issue of the time that it will take to get the necessary staff in place. Sue, you said that you were uncertain about the training period. Prior to this Committee, it had been suggested that it could take up to five years to train safeguards inspectors. Is that a reasonable period?

Sue Ferns: I think that that is a reasonable assumption. The reason I said I was a bit uncertain is that it depends on where you get these people from and what their previous experience is. A reasonable approximation is several years—it is not a matter of months but years for people to be able to do that job. Yes, it is about knowledge and skills—and there are a lot of knowledge and skills in the industry—but there are specific aspects of an inspector’s role. This is a warranted role; this is not just working in the industry. It is not just about knowledge, but experience and commanding the confidence of the companies and the organisations that you deal with, so there are very specific aspects to that role. I think that it is a period of years. Of all the things that worry ONR, this is probably one of the key ones, if not the key one. As I say, I think it is doing the absolute best it can, but this is one of the things that keeps them awake at night.

Q70 Paul Blomfield: That comment probably reflects the very helpful conversation we had with Dr Golshani this morning. I think we all formed the impression that it is doing its very best, but that there is a real worry about the size of the talent pool from which it could draw. Do you want to reflect on that?

Sue Ferns: Absolutely. It is a small talent pool, and it is a challenging talent pool even in the best of times. To use what may or may not be an appropriate analogy, it is fishing in a defined and restricted pool, and we are now saying it has to increase its catch from that pool. That is a hard and really difficult thing to do. Also bear in mind that ONR is subject to public sector constraints in its recruitment and payment practices. If it has to compete with the commercial sector, something will have to give in that regard. How can the catch from that limited pool be increased under the constraints it is operating in? The job is getting tougher and bigger, and there are multiple challenges.

Q71 Paul Blomfield: You said in your evidence, Sue, that you were concerned that the powers of the inspectors were not set out in the Bill. Can you elaborate on exactly what your concerns are?

Sue Ferns: The concerns are set out in our evidence. If you look at sections 20 to 22 of the Health and Safety at Work etc Act 1974 and schedule 8 to the Energy Act 2013, they set out in some detail what the powers of the inspectors will be. I know there is reference to that in the schedule to the Bill. These concerns come directly from people who will have to do this job. As warranted inspectors, they feel that it is important to have those powers in the Bill. It is important for purposes of parity, to ensure continuity—these things should not be left to the discretion of future Ministers—and also, as we have discussed, for external confidence in the way the job will be done. That is why we believe very strongly that those powers should be specified. I have not heard an argument to say why, if it is good enough for the 1974 Act and the 2013 Act, we should contemplate a change in practice for this piece of legislation.

Q72 Dr Whitehead: May I briefly follow up on that thought? As you say, schedule 8 to the Energy Act 2013 looks like a comprehensive range of powers and definitions for what inspectors can and cannot do, except it excludes nuclear safeguarding from that definition. If nuclear safeguarding were included among those powers for inspectors, would it be the case in your view that what is in the 2013 Act—provided you switched off those prohibitions—would be sufficient to give the inspectors the powers and the arrangements they felt would be necessary for the transfer of inspection from Euratom to ONR? Or are there other matters that you think should perhaps be included in the schedule to the Bill that would comprehensively do the job, as far as those inspectors were concerned?

Sue Ferns: I think achieving that would be an important step forward. However, as we have set out in our evidence, we have identified three other matters, because you would then have to be clear about what safeguarding means in law. The three bullet points in paragraph 5 of our evidence are points where we think that specific clarity is required in relation to what that would mean in a safeguarding regime. Is that clear?

Q73 Dr Whitehead: One of the problems with schedule 8 to the 2013 Act is that it refers to a number of other bits of legislation. I am not sure whether inspectors’ current powers that are switched off in relation to nuclear safeguarding could simply be transposed into being switched on, bearing in mind what the 2013 Act says about other constraints on inspectors relating to other Acts. I do not know whether that coincides with your concerns about what might or might not be in the legislation, or whether it needs to be achieved by physically placing all of what is in the 2013 Act plus anything else necessary in the Bill or whether that could be achieved by other means. I still have some doubt in my mind. Do you share that doubt, or do you have a better idea about how to do it?

Sue Ferns: I am not an expert on how to draft legislation, but I understand you are asking whether we should take the schedule from the Energy Act 2013 and put it in the Bill, along with any other points that may need to be included. That is certainly our preference, and it is certainly the preference of the members we represent in these roles.

Kevin Coyne: In addition, we would indicate that your knowledge is greater than ours at the moment on the 2013 Act. The importance of the inspectorate is its neutrality and independence. If you are saying that there is an element in there that is currently switched off that can be switched on, that would be an important contribution, but you must ensure that it has that neutrality and independence, because that is what gives status and quality to the current inspectorate through Euratom. I do not go to bed at night reading the 2013 Act, but I cannot remember it addressing the independence issue, which I think would be an important element.

Q74 Dr Whitehead: I want to get a better understanding of the duties and responsibilities—and, indeed, appointment and placement—of inspectors when we exit the EU. What view might the IAEA take about the readiness or otherwise of the regime when it considers the voluntary agreement that we will have to make with the IAEA when we exit Euratom? Is it your understanding that
one of the things that the IAEA will consider is whether
we are genuinely ready to undertake the additional
work and reporting back to the IAEA rather than
Euratom that the voluntary agreement would entail?
The IAEA will either come to an agreement based on
the fact that we look ready or, alternatively, say that
more work is needed before we can come to an agreement.
Presumably, however, an agreement will have to be
reached by the time we exit the EU.

Sue Ferns: My understanding is that the IAEA will
require certain standards to have been met before anything
else can happen. What I understand, though, is that
during the Second Reading debate on the Bill, there was
a lot of talk about replicating the Euratom powers. My
understanding is that that is not necessarily the IAEA
hurdle, because I think the IAEA hurdle is slightly
lower than replicating the Euratom powers. Certainly,
there will be a requirement to meet IAEA standards.

Q75 Trudy Harrison: Just changing tone slightly, I
notice, Kevin, that you have a reference to concern
around radioactive isotopes. I do not share that concern.
I do not understand why you think this is relevant to
Euratom, because they are not fissile material. I have
not heard of anyone using plutonium or uranium in
medical practice. I wonder, if they have not been risk-
assessed by the IAEA, why you would feel there is a
concern about their falling under the realms of Euratom.

Kevin Coyne: I think that is an area which is of
serious consequence. I think it is generally not well
known—the fact that Euratom covers the transportation
of materials—or that isotopes that are used in the NHS,
for instance, come from Holland and other countries.
We do not have the reactors in this country to produce
them. I understand what you say about the registration.
We highlighted that as a concern because there is a
two-day, three-day shelf-life: this comes from us as a
union that operates within the NHS at quite an extensive
level. In terms of the delivery and transportation of
that, there are sometimes delays. So our point is that the
change of regimes and the difference in what might
occur may cause that to be delayed even further and
therefore impact upon the NHS itself. We make no
stronger point than that we ought to look at the impact
upon isotopes in hospitals.

Q76 Richard Harrington: On that point, if I may
clarify, given that that has been brought to my attention—I
have agreed to see the Royal College and other people
who are interested. Is your point that the movement
of the isotopes is perhaps to do with what happens with
Brexit—that is, the movement of any foreign goods—or
is it a Euratom point? We think on the former you have
a point, but on the latter you are mistaken.

Kevin Coyne: A Euratom point—and you think I am
mistaken about that?

Richard Harrington: Well, because I can quite understand
the point that they have got to be overnight, or very
quickly, and all that kind of thing—would that be
affected by a change of law when we Brexit. My advice,
though, is very clear; I have asked a lot of people, as you
might imagine. It is very much Trudy’s point, which is
that, whatever one thinks about Euratom and so on, the
medical isotopes are not covered within the fissile definition
of Euratom. Do you feel that we are wrong on that, or
was your point, “Yes, we’ve got to get them quickly and
without paperwork and all that kind of delay”—which
may or may not happen afterwards?

Kevin Coyne: Our information, as I said, was simply
that upon the basis of the delays in transportation, due
to the change in regime, we thought we ought to have
in place a cast-iron security, as we do now, to make sure
that those delays do not unnecessarily happen.

The Chair: Finally, Alex Norris, before we break for a
vote.

Q77 Alex Norris: Thank you. We have heard the Bill
classified in lots of ways—whether it is a place-holder,
a contingency. We have heard from yourself and previous
speakers about the fear of a lack of clarity about what is
on the face of the Bill. What impact is this uncertainty
having on staff?

Kevin Coyne: Generally, among staff in the nuclear
industry?

Alex Norris: Yes.

Kevin Coyne: If the truth be said, I would imagine
that a majority of staff still are not aware of the massive
ramifications—certainly among my members. Sue is
much closer to the issues in terms of the roles that they
take. It is becoming more widely known. That certainly
was not an issue, as you recall, within the Brexit discussions,
so the general knowledge of it is not that great. What is
important is that those organisations that do know—you
heard from EDF earlier—are now briefing very widely
on the impact that it may have, particularly in terms of
the items I listed. For instance, the people at Springfields
are acutely aware, because of the impact upon that
nuclear new build and on nuclear new build projects for
the future. There is concern—it is important to say
that—but as for whether it is widespread across all the
staff, I do not think I could lead you to that view
currently, but clearly it will affect all staff that work
within the nuclear industry.

Sue Ferns: Among our members there is quite an
awareness of this now. We recently did a survey of all
our members in the industry, and well over 80% wanted
either to stay in Euratom or in some form of associate
membership of Euratom because of the concerns or the
uncertainty they had about leaving. I would say that in
the research areas, concerns are very high. JET, for
example, is already finding it more difficult to recruit
because of the uncertainty about the future of the
organisation. Of course, the issue there is very much
one of the free movement of people. It has a workforce
that is 60% EU nationals, so it is a major priority, but
across the rest of the industry there are levels of 80% or
more expressing a preference for an alternative future.

The Chair: On behalf of the entire Committee, I
thank both our witnesses, Kevin Coyne and Sue Ferns,
for their extremely interesting and useful evidence which
added to our understanding and will be useful in the
debates that lie ahead in the next couple of weeks. The
Committee will know that there is to be a vote which
has to be by 3 pm. Rather than starting the next session, I think we should stop now and do our best to get back by 3.10 pm.

2.56 pm
Sitting suspended for a Division in the House.

3.12 pm
On resuming—

Examination of Witness
Professor Juan Matthews gave evidence.

The Chair: I welcome Professor Juan Matthews, a visiting professor at the Dalton Nuclear Institute. I am told that another Division is due within half an hour, so I would like to conclude our discussions by that time and keep remarks brief. Will you start, Professor, by introducing yourself and giving some brief comments on the Bill?

Professor Matthews: My name is Juan Matthews. I currently work with the Dalton Nuclear Institute of the University of Manchester as a postgraduate teacher of nuclear technology, and I also advise on government and international relations. My previous role was with UK Trade and Investment, which is now the Department for International Trade, where I was a nuclear specialist assistant in 1962 at the age of 16, working in a fuel development lab, so I have practical experience of coming up against nuclear safeguards.

As far as I am concerned, the Bill is very clear and uncontroversial. The things associated with the Bill are more problematic, as several people who are much better qualified than me have already commented. I would like to point out a couple of things that came up in the recent discussion.

The term “inspector” as it is being used is not clear, in the respect that nuclear inspectors are normally people who look at the safety of facilities; nuclear safeguards are quite different because they require a different set of skills and a different stance. The personnel cannot be interchanged; one cannot just take staff from the Office for Nuclear Regulation and say, “Next week you start doing nuclear safeguards.” It is not as easy as that. There was also a brief mention of isotopes. Of course, that is not at all relevant to the Nuclear Safeguards Bill, but I point out that chapter 9 of the Euratom treaty guarantees the unimpeded transport and tariff-free trade not only of nuclear materials but also of radioactive isotopes used in medicine and industry.

The Chair: As you correctly say, that is beyond the scope of the Bill. I did not interrupt earlier but if it comes up again, I will.

Professor Matthews: I thought I would clarify.

The Chair: It is most kind of you. The Minister may want to clarify the difference between inspectors and safeguarders.

Richard Harrington: I do not feel able fully to clarify the point at this juncture. Mr Gray. Usually the mistake is made—not that Professor Matthews would—between safety and safeguarders, but we are looking at the safeguards regime here, which includes physical inspection, mentioned today by quite a few of the people giving evidence, and, though I do not quite know how to use the expression, remote inspection by cameras and other sets of kit, which at the moment belong to Euratom but I am sure will be part of the new safeguards regime.

Professor Matthews: There are three components in nuclear safeguards. One is nuclear materials accountancy—that is, keeping track of nuclear materials. Then there are two skills that go along with that. One is assaying, determining the amount of nuclear materials—

Richard Harrington: That is laboratory testing the quality and the content.

Professor Matthews: And observing and recording movements of nuclear materials, without both of which you cannot do the accountancy.

Richard Harrington: I would accept that.

Professor Matthews: That is quite different from proving a safety case for the operation of a nuclear installation.

Richard Harrington: I would accept that.

The Chair: Exceeding my role as Chairman, it might be something you would ask your officials to look into for later consideration during the Bill?

Richard Harrington: They already are.

The Chair: They already are. That has answered the point; good.

Q78 Trudy Harrison: May I ask for clarification? You say they already are: will there be some kind of appraisal of the staff skills, knowledge and qualifications required to carry out the function of Euratom in the UK, to determine what skills are required?

Richard Harrington: Is it acceptable for me to answer?

The Chair: Why not? It is slightly unusual, but why not?

Richard Harrington: Why not? I am quite happy to. That function, currently done by Euratom, will be done by the new safeguards regime. It will be responsible for examination and testing and making sure there are suitably qualified inspectors, in the same way that Euratom does now.

Q79 Dr Whitehead: I think you were in the session when we heard evidence from our previous witnesses this afternoon concerning what is in the Energy Act 2013 and in other Acts concerning the responsibilities and powers of and prohibitions on nuclear inspectors in general. You have made the very precise point that the role of an inspector relating to nuclear safeguarding is certainly not the same as the role of an inspector relating to nuclear safety: they will have different skills and responsibilities. Is it your understanding, however, that what is in the legislation at the moment concerning the overall powers and responsibilities of inspectors is sufficient for the purpose of bringing under the regulation of ONR a number of inspectors who previously would not have been covered by that area of responsibility but
would have been reporting to Euratom and covered by whatever Euratom decided was necessary as far as that inspection and safeguarding is concerned?

**Professor Matthews:** Clearly, the operation of the Office for Nuclear Regulation requires a range of different roles. I would see no problem with adding an additional role to the range of roles that are already in the organisation. It is just the physical people are different people who do these different things. Indeed, nuclear inspectors themselves have different backgrounds and specialisations, and diverse education as well. I suppose it is extending the range of what the Office for Nuclear Regulation does.

**Q80 Dr Whitehead:** From your point of view, there is nothing that you might think needs to be added, over and above what general powers inspectors have, when we are in a situation where inspectors are reporting to ONR—and, presumably, it would then be sufficient simply to add them to the club of the powers of inspectors as they presently stand in legislation?

**Professor Matthews:** I would have to look at the documents and examine them in detail to be able to answer that question fully. It is a different role. I would expect it not to be covered within the current definitions in the documents, but I do not have access to them and cannot check that now. But I would be very surprised if it was covered. It would need something added.

**Q81 Alex Norris:** Professor Matthews, you are responsible for training and teaching the next generation of nuclear engineers—no pressure. How ready and willing are they to take up the roles that they are going to need in order to replicate Euratom in this country, and how soon might we be able to think that they may be able and willing to do that?

**Professor Matthews:** The young people that I am encountering in my current activities are ready to take on responsibility and do things. I am very impressed by them. I am sure there are people who are capable of taking on these roles. The only problem is that there is competition. Those same people are valuable and can be used in all sorts of ways. Whether it is possible to assemble the right people quickly to be able to avoid any hiatus in the operation of our industry is another matter. Certainly, at the moment, the people that we train have no problems finding jobs.

**Q82 Alex Norris:** The cohort you teach at the moment in Manchester—where are they from?

**Professor Matthews:** There are two main programmes I teach on. One is the new generation centre for doctoral training. That is a collaboration between five universities in the north of England and we have a cohort of about 25 a year. That has been going on for the last five years. Almost all of them are British nationals from diverse backgrounds. We have one or two foreign nationals in there, but they are the exception. The other programme I teach on is the nuclear professional development programme, which is a master’s degree for people working part time who are managers in the nuclear industry in the UK. We have had one or two foreign students on that—I even had a commander in the Brazilian navy—but most of the people are British nationals working in our nuclear industry.

**Q83 Mary Robinson:** It is great to know that in Manchester you train up these great future scientists; they are the technical, highly skilled jobs that we need. One of your issues and concerns seems to be about having sufficient staff to man the safeguarding progress at a time of high build, because we are building new power stations—so there is that to factor in, as well. To what extent is this an exciting time in the industry for jobs and high-skilled jobs, as well as a challenging one?

**Professor Matthews:** It has been a difficult time for us, because there was such a long delay in the announcement of the final investment decision for Hinkley Point C. That made people relax, so it has proved easier to recruit good engineers to join our nuclear programmes at the university as a result. Certainly, the prospect of building 16 GW of nuclear reactors is stimulating the people moving into the industry. But it is not only that. We have to cope with the problems of legacy, decommissioning and radwaste management. There are nuclear fuel cycle industries, very likely with both fuel manufacture and enrichment. All these things require the nuclear safeguards to be operating, and any interruption in that—we are talking about something like £10 billion a year in UK activity that would be interrupted.

**Q84 Mary Robinson (Cheadle) (Con):** When you say £10 billion, what is that related to?

**Professor Matthews:** That is related to the operation of nuclear power stations in the fuel cycle industry, which consists of processing and manufacturing nuclear fuels, manufacturing the nuclear fuel elements, and enrichment of uranium. The work still going on at Sellafield on reprocessing will stop shortly, but there is the handling of materials from Sellafield for decommissioning and radwaste management, all of which contain higher actinides and uranium, which are covered by the Nuclear Safeguards Act 2000. We need to know what is going into the waste to ensure that we are not making a plutonium mine or something that someone could tap in the future.

**Q85 Mary Robinson:** So the training that you are doing and undertaking with the students in Manchester is crucial to the future.

**Professor Matthews:** Yes, but it is not enough, even at the rate that we are going. We have two major doctoral programmes in the UK that we co-operate with—one in the south with Imperial College, Cambridge, and the Open University, and one that we have with five universities in the north. That is only about 50 students a year. We need to bring into the industry hundreds of students a year, which means that we must be able to bring in people from around the world, mainly from Europe, but also from more widely around the world.

There is an opportunity from Germany at the moment—its industry is contracting because it is shutting down plants. It does not seem to be managing the decommissioning problem very well, so people are leaving Germany very rapidly.

**Q86 Mary Robinson:** Are they being attracted here?

**Professor Matthews:** They were, but they are not any more.

**Q87 Paul Blomfield:** Professor, could we return to your primary concern, which we have also exercised with previous witnesses? It concerns the ability of the
ONR to recruit sufficient inspectors by March 2019—you helpfully clarified the difference between safeguarding inspectors and safety inspectors. How likely is it that the ONR could meet the staffing levels necessary to take over the Euratom function in safeguarding by that date?

Professor Matthews: I heard the recording this morning of the ONR representative. It looks unlikely that it will be fully functioning by March in two years’ time. The question is: how can we bridge the gap until everything is working properly?

Q88 Paul Blomfield: I guess in lots of other areas, having got close and being not quite but almost fully functioning might be satisfactory. In this specific area, what are the consequences of not having a fully functioning safeguarding regime in place?

Professor Matthews: Springsfields, which produces nuclear fuel, will stop working. The Urenco plant at Capenhurst, which is part of three plants in the Netherlands, Germany and the UK, will stop working because it will not be able to move uranium around. We in the UK no longer do conversion, which is changing uranium into uranium hexafluoride, which then goes to the enrichment plant and is converted back to oxide or metal for application. That requires movement, and all of that would stop.

It would be difficult for Sellafield and other decommissioning sites, such as the old research sites at Dounreay, Harwell or Winfrith; some of the work there would grind to a halt as well. Eventually, when the fuel charges were removed from reactors operating in EDF Energy’s plant, those would all stop, which would take something like 9 GW of power out of our network at a time when we are perilously close to blackouts. It would be a very serious measure indeed if there was a hiatus.

Richard Harrington: Thank you for that, Professor Matthews. You are of course using my argument for why we need the Bill; thank you for supporting it. Dr Mina Golshan, whose organisation is responsible for recruiting the 15 people we are talking about, said that recruitment had already started. Once the Bill proceeded beyond Second Reading—I thank everyone, including Opposition Members, for voting for that—it meant that the financial resources needed for the IT and recruitment are provided. We are very well aware of that.

I thank you for your de facto support for the Bill. I have of course noted the points you have made, and I will be very happy to chat about them on another occasion. The purpose of the Bill is precisely to get over the issue of finance? I think we all know that, as a question of finance? I think we all know that, as a contingency, we need the safeguarding regime that is set out in the Bill. What I think we do not know is what will happen with the various finances involved in the whole process. I characterise that in two ways. First, what will happen to what we previously paid to Euratom, and presumably would have to pay and then recover—as is mentioned in the Bill—via ONR, for the cost of the inspectors, who would previously have been part of our contribution to Euratom but will now be a UK contribution?

Secondly, I understand that the Torus fusion project at Culham will be a subject of safeguarding inspection. Will that be financed, subsequent to our leaving Euratom, in a way that is commensurate with its present level of assistance, which largely comes, as you are aware, from EU funding? Do you have any comment on that?

Professor Matthews: There is a difficulty here and I do not know if it is recognised in the Bill; it perhaps needs scrutinising. The only mention in the Bill and in these discussions is of our fissile materials. We are talking about uranium, plutonium and other actinide isotopes, and precursors such as thorium, which can be converted into fissile materials. In the case of Culham and the fusion programme, they use tritium. Tritium is a material that comes under safeguards, which is not a fissile material. It is a material that is a component in hydrogen bombs, and it is controlled. I remember getting into trouble as a young scientist. I was asked to assess the use of lithium-6 as an absorber for a fast reactor project. I phoned up a French supplier of lithium-6, and next thing I had security down on me, because tritium is produced from lithium-6 and is a controlled material. I do not know whether any consideration is being made of the control of tritium with respect to Culham and nuclear safeguards.

Dr Whitehead: Would there be other materials that are not fissile but would also be controlled and inspected under safeguards?

Professor Matthews: We are getting into areas that we cannot really discuss here.

The Chair: Yes. Perhaps fissile materials are slightly beyond the scope of the Bill.

Richard Harrington: That is beyond the scope of the Bill, but perhaps we could discuss it, although not necessarily now, in the evidence session. I am happy to discuss it, but I suspect that your interpretation is correct, Mr Gray, and it is beyond the narrower scope of the Bill. I am happy to discuss it with the Shadow Minister.

Dr Whitehead: One might argue that the scope of the Bill is too narrow for the safeguarding that we need to undertake.

The Chair: It does not matter. The scope of the Bill is the scope of the Bill. Let us not get into a chat among ourselves. The reality is that the Bill is as printed, and it is the Bill as printed that we have to discuss, under the long title and the short title. Of course, within that we can amend it as much as we like. My instinct is that the Committee have done our work for the day. Thank you very much, Professor Matthews, for your very useful evidence, both written and in person. I assure you that it will be taken note of in the discussions that lie ahead, starting on Thursday, when my colleague Mr McCabe will be in the Chair. The Committee will see me again, assuming that we sit—we will no doubt sort that out—next Tuesday.

Ordered, That further consideration be now adjourned.

(Rebecca Harris.)

3.36 pm

Adjourned till Thursday 2 November at half-past Eleven o’clock.