

# **THE ENERGY ACT 2008**

## **The Government Response to the Consultation on revised Funded Decommissioning Programme Guidance for New Nuclear Power Stations**

December 2011

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## Introduction

1. On 7 December 2010 the Government published a consultation to request views on the draft Guidance for what an approvable Funded Decommissioning Programme (FDP) should contain. This document sets out the Government Response to the consultation.
2. The finalised Guidance will assist Operators in understanding their obligations under the Energy Act 2008<sup>1</sup> (the Energy Act). The Energy Act requires an Operator of a new nuclear power station to have an FDP approved by the Secretary of State for Energy and Climate Change (Secretary of State) in place prior to construction of a new nuclear power station, and to comply with the FDP thereafter.
3. The Guidance is not intended to be unduly prescriptive and therefore sets out the principles that the Secretary of State would expect to see satisfied in the FDP prepared by an Operator. The Guidance gives information on the ways in which an Operator might satisfy those principles.
4. The December 2010 consultation followed a previous consultation on draft FDP Guidance in February 2008<sup>2</sup>. The Government's response to this consultation was published in September 2008<sup>3</sup>. The comments responding to this consultation were generally supportive of the proposals, which were seen, on the whole, as a sensible and practical way forward.
5. Since the 2008 consultation, the Energy Act has come into force, as have the Regulations<sup>4</sup> and Order<sup>5</sup> made under the Energy Act. These represent significant developments with respect to the framework for the financing of decommissioning, waste management and waste disposal that the Government is putting in place. The Government has also consulted on a methodology for pricing the transfer to the Government of title to and liability for intermediate level waste (ILW) and spent fuel from a new nuclear Operator<sup>6</sup>. Also over this period the prospective nuclear Operators have been developing their approach to the FDP as their broader plans have progressed. Given these considerations, the Government considered

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<sup>1</sup> <http://www.legislation.gov.uk/ukpga/2008/32/contents>

<sup>2</sup> <http://webarchive.nationalarchives.gov.uk/+http://www.berr.gov.uk/files/file44486.pdf>

<sup>3</sup> <http://webarchive.nationalarchives.gov.uk/+http://www.berr.gov.uk/files/file47629.pdf>

<sup>4</sup> The Nuclear Decommissioning and Waste Handling (Finance and Fees) Regulations 2011 came into effect on 1 April 2011, <http://www.legislation.gov.uk/uksi/2011/134/made>

<sup>5</sup> The Nuclear Decommissioning and Waste Handling (Designated Technical Matters) Order 2010 (SI 2010/2850) came into effect on 30 November 2010,

<http://www.legislation.gov.uk/uksi/2010/2850/contents/made>

<sup>6</sup> <http://www.decc.gov.uk/assets/decc/Consultations/nuclear-waste-transfer-pricing/984-consultation-waste-transfer-pricing-method.pdf>

it appropriate to undertake a further public consultation in order to refine and finalise the Guidance.

6. The deadline for responses to the consultation was 8 March 2011. A total of 36 formal written responses were received, which are available on the DECC website<sup>7</sup>. The respondents included: energy suppliers; nuclear industry organisations; environmental organisations; public sector organisations; advisory organisations; individuals and other interested parties. A list of respondents is set out at Annex A. The Government is very grateful to all those who submitted formal written responses, and those who participated in the public event held during the consultation period.
7. All responses (both formal written responses and those fed in at the consultation events) have been considered carefully. Some of the responses were very detailed, for example responses submitted by the prospective new nuclear consortia. Other responses spanned a wide range of issues on nuclear power in general as well as views on and related to the questions in the consultation document. This document responds to the key questions and broad comments received.

### Events held during the consultation period

8. The consultation period was used as an opportunity to explain and discuss the Guidance at an event for stakeholders and other interested parties held in London on 21 February 2011.
9. The event began with an overarching presentation on the aims of the Guidance and its context within wider nuclear policy. This was followed by specific sessions on each of Part 1 and Part 2a (relating to the FDP as a whole), Part 2b (relating to the Decommissioning and Waste Management Plan (DWMP)) and Part 2c (relating to the Funding Arrangements Plan (FAP)). The table discussions focused on the questions set out in the consultation document and were recorded as an input to the consultation. The second half of the day focused on the updated Waste Transfer Pricing Methodology for pricing the disposal of higher activity waste from new nuclear power stations<sup>8</sup>.

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<sup>7</sup> [http://www.decc.gov.uk/en/content/cms/meeting\\_energy/nuclear/new/waste\\_costs/waste\\_costs.aspx](http://www.decc.gov.uk/en/content/cms/meeting_energy/nuclear/new/waste_costs/waste_costs.aspx)

<sup>8</sup> <http://www.decc.gov.uk/assets/decc/Consultations/nuclear-waste-transfer-pricing/984-consultation-waste-transfer-pricing-method.pdf>

## Structure of this Government Response

10. The consultation document posed the following questions:
  1. Do you agree or disagree that the draft Guidance sets out what an approvable Funded Decommissioning Programme should contain to ensure that an Operator of a new nuclear power station (i) estimates the potential costs of decommissioning, waste management and waste disposal (i.e. the designated technical matters) and (ii) makes prudent provision for meeting their liabilities? What are your reasons?
  2. Does the draft Guidance contain sufficient information to enable an Operator of a new nuclear power station to understand the matters that their Funded Decommissioning Programmes should contain?
11. The comments received during the consultation on balance supported a principles-based, rather than prescriptive, approach to the Guidance. This was to allow Operators to have the flexibility to put forward alternative approaches while still meeting the Objective and complying with the Guiding Factors set out in Part 1 of the Guidance. There was also broad support for the restructuring of the document to follow the legislative framework requirements.
12. However, most comments received related to specific points within the Guidance rather than to the consultation questions. The Government Response has therefore been set out in keeping with the structure of the Guidance, as follows:
  - Part 1 of the Guidance sets out those factors which may be appropriate for the Secretary of State to consider in deciding whether or not to approve an FDP, to approve with conditions, or whether to modify an FDP which has already been approved, under section 54(6) of the Energy Act. Part 1 sets out the Objective of the FDP regime and the Guiding Factors.
  - Part 2 of the Guidance sets out information about preparation, content, Modification and implementation of FDPs under section 54(5) of the Energy Act.
    - Part 2a sets out Guidance relating to the FDP as a whole. This sets out information on the publication of the FDP, record keeping, reporting requirements, provisions on change in ownership of control of the Operator or site and Modification of an FDP.

- Part 2b sets out the DWMP Guidance. This will assist Operators in setting out and costing the steps involved in decommissioning a new nuclear power station and managing and disposing of hazardous waste and spent fuel in a way which the Secretary of State may approve.
- Part 2c sets out the FAP Guidance. This will assist Operators in setting out acceptable financing proposals to meet the costs identified. It will set out information on the factors by which the Government would expect to assess the funding proposals submitted by Operators as part of an FDP.

### **Code of Practice on Consultation**

13. The Government's Code of Practice on Consultation<sup>9</sup> applies to the consultation addressed by this document.

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<sup>9</sup> <http://www.bis.gov.uk/files/file47158.pdf>

# Part 1: Guidance under section 54(6) of the Energy Act 2008

## Comments on the Objective of the FDP regime

- 1.1 The comments received showed general support for the principle of the Objective, which is to ensure that Operators make prudent provision for: the full costs of decommissioning; and their full share of the costs of safely and securely managing and disposing of their waste and that in doing so the risk of recourse to public funds is remote at all times.
- 1.2 Some respondents commented that it would be difficult to achieve the Objective in the absence of an agreed definition of “prudent”. It was suggested that an FDP which had been approved by the Secretary of State should define what was meant by “prudent”.
- 1.3 It was also argued that the level of uncertainty over how new nuclear Operators will decommission their power stations and manage and dispose of their waste is such that it would not be possible to devise a plan which adequately protects the taxpayer.

## The Government’s response

- 1.4 The Government does not consider it necessary to define prudence as the Secretary of State will consider whether the plan as a whole represents prudent provision when deciding whether or not to approve an FDP. However the Government accepts that by approving an FDP as prudent, the Secretary of State is setting a benchmark against which subsequent assessments of prudence are likely to be compared.
- 1.5 The Government recognises that there are some significant uncertainties regarding the manner in which new nuclear power stations will be decommissioned and the disposal of waste managed. However, the Government does not agree that it is impossible to produce a prudent FDP. The Base Case contained in Part 2b of the Guidance sets out an approach to estimating costs based on current technology and a set of prudent assumptions. This will help to ensure that the Operator develops a plan that makes prudent provision for all of the elements that require financial provision, bears the risks around uncertainty in costs and in turn will provide material protection for the taxpayer.



## Comments on approval of the FDP

- 1.6 Some respondents argued that it was important for there to be transparency regarding the approval of an FDP by the Secretary of State. It was suggested that a proposed FDP should be published for parliamentary and public scrutiny prior to approval, and that any subsequent Modifications to an FDP be subject to similar scrutiny. It was also suggested that any advice provided by the Nuclear Liabilities Financing Assurance Board (NLFAB) should be made public.
- 1.7 Several respondents also felt that there needed to be better explanation of the approvals process. One respondent stated that the draft Guidance did not set out how the public would be notified of the Secretary of State's decision regarding approval of an FDP and whether such notification would be accompanied by details of the FDP.

## The Government's response

- 1.8 When making a decision on whether or not to approve an FDP, the Secretary of State must be satisfied that it is consistent with the Guidance. In reaching his view, the Secretary of State will be advised by the NLFAB and must seek the views of the nuclear regulators.
- 1.9 The Secretary of State, mindful of the public interest in these arrangements, would expect to publish the decision and the advice from NLFAB except where issues are commercially confidential or have security sensitivities. The Guidance also states that the Secretary of State would expect the Operator to publish as much of the FDP as possible, except for material of a sensitive nature.
- 1.10 The FDP submitted by an Operator will be a complex, technical document that the Government does not consider appropriate to publish for consultation. The Secretary of State's decision on whether to approve the FDP will be based on whether the FDP complies with the published Guidance, which has been subject to two public consultations.

## Comments on Guiding Factor: clear structure

- 1.11 There was general support for the separation of the Guidance into Part 1 and Part 2 to reflect the requirements under the different sections of the Energy Act. There was also support for splitting Part 2 into three sections; Part 2a relating to the FDP as a whole; Part 2b relating to the DWMP and Part 2c relating to the FAP. It was suggested that the three part structure adopted in Part 2 would be helpful for Operators to adopt in the FDP, rather than the two part structure of DWMP and FAP.

- 1.12 In response to the section in the draft Guidance suggesting that elements of the FDP could be reinforced through contractual arrangements, one respondent commented that contractual obligations could be the principal means by which the rights and obligations of those involved in an FDP were clearly established.

### **The Government's response**

- 1.13 The division of the FDP into FAP and DWMP is not a statutory requirement and an FDP compiled on an alternative basis would be acceptable for the purposes of the Energy Act.
- 1.14 The FDP can be reinforced through contractual arrangements provided that the Secretary of State is satisfied that the obligations under the FDP can be enforced and there is no conflict between any obligations under the FDP and any contractual obligation. It is important that the FDP must meet the requirement in the Energy Act that it is a "programme".

### **Comments on Guiding Factor: realistic, clearly defined and achievable plans**

- 1.15 Some respondents were concerned that the level of uncertainty over how decommissioning, waste management and waste disposal will be carried out in practice could make it difficult to set out realistic and achievable plans when an FDP was first submitted for approval.
- 1.16 Several respondents commented on the requirement for the Operator to demonstrate consistency with the requirements and expectations of the regulators. More clarity on the interplay between the FDP framework and regulatory requirements was sought, and it was queried whether it was appropriate for the Operator to have to "demonstrate" this consistency within the FDP.

### **The Government's response**

- 1.17 The Government recognises that there are significant cost uncertainties and that these must be taken into account by an Operator when preparing its FDP. The purpose of the Base Case is to provide a basis for estimating costs that focuses on current technology and prudent assumptions. The Government therefore considers it possible to develop a plan that makes prudent provision for liabilities.
- 1.18 It is important that the FDP is consistent with regulatory requirements and expectations, and an Operator will be expected to show this in its plan prior to approval. The Government will work with the regulators to minimise duplication and maintain an aligned approach. This will help to ensure that the plans

submitted for approval by an Operator are also consistent with regulatory expectations.

### **Comments on Guiding Factor: robust cost estimates**

- 1.19 Several respondents commented on the level of uncertainty around cost estimates, given the long timescales. One respondent suggested that it would be prudent to set cost estimates at a worst case level.
- 1.20 Others respondents queried whether sufficient account would be taken of long term risk factors. Several respondents commented that environmental factors such as protection from coastal erosion, flood risk and rising sea levels as well as security, should be factored into the cost estimates provided by an Operator in order to ensure the taxpayer is protected.

### **The Government's response**

- 1.21 The Government considers that these uncertainties can be handled through the FDP framework. Operators should draw up a DWMP which sets out their assumptions of the costs involved in decommissioning, waste management and waste disposal. The DWMP should contain effective mechanisms to ensure that major project risks are identified and that the calculations of the costs take due account of risk and uncertainty. This would include factoring in provision for the cost of any risks that Operators set out in the DWMP in relation to environmental factors, such as those identified by respondents to the consultation. Operators should ensure that the cost estimates in the DWMP are consistent with the state of knowledge at the time of calculation.
- 1.22 The Operator's DWMP will be reviewed at each quinquennial review of the FDP in order that the assessment of risk remains up to date. Where the quinquennial report contains changes to the cost estimates and any changes to security provided to meet those costs, the Operator must include within the Quinquennial Report a Verification Report in respect of those changes.
- 1.23 Furthermore, new nuclear power stations are required to meet high environmental standards. The Operator will therefore need to demonstrate in their DWMP that the decommissioning of the nuclear power station and management and disposal of waste can be undertaken in a way that is consistent with the requirements and expectations of the environmental regulators.

## **Comments on Guiding Factors: transparency and clarity of terms and responsibilities**

- 1.24 It was suggested that the Guidance should provide greater clarity over the roles of the various actors in an FDP – the Operator, the Fund, the Verifier and Secretary of State. Another respondent noted that setting out roles and responsibilities in a contract would provide clarity and certainty.

### **The Government's response**

- 1.25 The Guidance is principles based and gives information on ways in which the Operator might satisfy those principles. It is for the Operator to set out clearly in the FDP the roles and responsibilities of the Fund, the Operator and other relevant entities (including the Verifier and any person with the obligations under the FDP). This will help the Secretary of State to form a clear view of their responsibilities and, where relevant, obligations under the FDP.

## **Comments on Durability**

- 1.26 Respondents drew attention to the long time periods covered by an FDP, including the period between the end of the power station's revenue generating phase and the actual completion of decommissioning. Some respondents were sceptical about the durability of the arrangements and the ability to protect the taxpayer over such a long term. Other respondents stressed that the long time horizons meant that it was important for there to be certainty for the Operator over the operation of the FDP and the roles and responsibilities of those involved.

### **The Government's response**

- 1.27 The Operator will need to set out arrangements in the FDP that remain applicable for the generating lifetime of the station, throughout decommissioning and until the operator has satisfied all of its obligations under the FDP. The Government believes it is possible to design durable arrangements that take account of the major risks involved, for example around ensuring the Fund is protected in the event of the insolvency of the Operator.

## **Comments on Guiding Factor: Fund structure**

- 1.28 Respondents expressed general support for the principle that monies should be held independently of the Operator. It was felt that this was important for public confidence. However a number of respondents stressed the need for clarity around the role of the Fund and the division of responsibilities between the Fund and the Operator. It was suggested that the Fund, although independent of both the Operator and the Government, should nonetheless be bound by the terms of the FDP as approved by the Secretary of State.

- 1.29 A number of responses raised risks that might threaten the sufficiency of the Fund, pointing for example to uncertainty over costs, or to the recent banking crisis, and raising questions over either the security of financial assets or the certainty of positive investment returns. The importance of ensuring mechanisms to protect against this risk were in place was stressed by several respondents.
- 1.30 Other respondents sought greater clarity over what would be acceptable to ensure sufficiency of the Fund. For example it was queried whether the reference to the Fund Assets being insufficient “at any date” might preclude arrangements whereby a fund shortfall was made up over time and another respondent suggested that Operators should insure against the risk of a funding shortfall.

### **The Government’s response**

- 1.31 The Government regards a Fund which is demonstrably independent of the Operator to be a key element in ensuring prudent provision. The Government recognises that the precise role of the Fund will be set out in the FDP and those responsible for the Fund will be required to discharge their duties in line with the requirements of the FDP.
- 1.32 The Government agrees that there are substantial risks regarding the sufficiency of the Fund that the Operator needs to address in its plans. The Government does not intend to be prescriptive since it is for the Operator to propose mechanisms to handle these risks.
- 1.33 The Guidance requires there to be mechanisms in the FDP to address shortfall in the Fund. The Guidance does not preclude proposals to make up deficits over time, provided that the Government is satisfied that there is sufficient security to protect the taxpayer during any period of deficit.

### **Comments on other considerations: Modification of an FDP**

- 1.34 A number of respondents referred to the Government’s proposal to amend the Energy Act to enable the Secretary of State to enter into an agreement with an Operator regarding the manner in which he might exercise his powers to propose Modifications to an approved FDP. In particular, some expressed concern that the consultation did not mention this amendment, nor address the possible implications of this for the Guidance.

## The Government's response

- 1.35 Section 46 of the Energy Act was amended to ensure that an appropriate balance is struck between the Secretary of State's powers to protect the taxpayer and the Operator's need for clarity over how those powers will be exercised. The Guidance has been updated to reflect this amendment.
- 1.36 Section 46 enables the Secretary of State to agree to use his power to propose Modifications under section 48 of the Act. Under this, the Secretary of State may not make or amend such an agreement unless satisfied that the agreement includes adequate provision for the Modification of the FDP in the event that the provision made by it for the Technical Matters (including the financing of the Designated Technical Matters) ceases to be prudent.

## Part 2: Guidance under section 54(5) of the Energy Act 2008

### Part 2a: Guidance relating to the Funded Decommissioning Programme as a whole

#### Comments on publication of the FDP and reports

- 2a.1 Several respondents considered it important that an Operator's FDP arrangements are as visible and transparent as possible. Some respondents suggested that an FDP proposed by an Operator should be subject to public consultation before the Secretary of State decides whether or not to approve the FDP. It was also suggested that subsequent Modifications to an FDP should similarly be subject to public consultation.
- 2a.2 There was also a comment regarding the Freedom of Information Act 2000 that the Government and Operators need to be able to work in a pragmatic and open way that allows them to reach sensible agreement on FDP proposals and that it may not be in the interest of the taxpayer if these discussions could not take place because of concerns regarding Freedom of Information requests.

#### The Government's response

- 2a.3 The Government recognises the level of public interest in the arrangements being made by Operators of new nuclear power stations for the costs of decommissioning, waste management and waste disposal. It is for this reason that the Government has consulted on the draft Guidance. It is also for this reason that the Guidance sets out that the Secretary of State would expect the Operator to publish as much of the FDP as possible except for material of a sensitive nature. The Secretary of State also expects Annual Reports and Quinquennial Reports to be published by the Operator taking into account, as appropriate, commercial confidentiality and security considerations.
- 2a.4 However the FDP is expected to be a complex document with substantial technical and legal content. The Government does not consider that it would be an appropriate document on which to seek views through a consultation.

## Comments on record keeping

2a.5 A few respondents raised concerns around possible “dual regulation” arising from the provision in the Guidance relating to record keeping. It was suggested that this was not necessary as the Nuclear Site Licence record keeping requirements are already comprehensive.

### The Government’s response

2a.6 The Government recognises that record keeping is an existing regulatory requirement and does not intend to duplicate or conflict with this. However, the Government notes that there are likely to be specific cases where some additional record keeping may be required to ensure compliance with the FDP. For example, regulatory requirements do not require an Operator to assess the cost implications of technical or operational changes recorded, but this will be necessary for the purposes of ensuring an up-to-date FDP.

## Comments on the Annual Report and Quinquennial Report

2a.7 The draft Guidance refers to the requirements under the Regulations for an Operator to produce Annual Reports and Quinquennial Reports. Some responses raised questions about the practicality of the reporting requirements under the Regulations, in particular regarding the time limits for the provision of Annual Reports and Quinquennial Reports, and argued that for accounting and transparency reasons it would be sensible to align FDP annual and quinquennial reporting to an Operator’s financial reporting period. There was also a suggestion that there should be the flexibility to bring forward a quinquennial review where there were good operational reasons to do so.

### The Government’s response

2a.8 The Government notes that Operators will be required to comply with the provisions of the Regulations, and the Guidance cannot override those provisions. The Government is considering whether some amendments to the Regulations might be appropriate to address points raised in this consultation and, if so, will publish proposals in due course.

## Comments on notification

2a.9 A respondent commented that the Fund should only be obliged to notify the Secretary of State of the events described in paragraph 2a.21 of the draft Guidance where the Fund is directly affected or, in relation to the Operator, where the Fund has knowledge of the events. Another respondent commented that the Operator may choose a structure where it would be



unnecessary and unworkable always to give prior notice of a change of ownership of the Fund.

### **The Government's response**

2a.10 It will be for the Operator to set out in its FDP the respective roles of the Operator and Fund in relation to providing notifications to the Secretary of State. The Guidance allows for notification on or prior to the occurrence of an event, as appropriate. It will be for an Operator to propose, and the Secretary of State to approve, those events that will be notified prior to their occurrence.

### **Comments on verification**

2a.11 Several respondents asked for clarity as to the role of the independent Verifier, who can appoint an independent Verifier, and what is required for a Verifier to be independent of the Operator. It was suggested that it would be helpful if the requirements in respect of the independence of the Verifier took account of the fact that there is a small pool of suitably qualified persons that an Operator could engage.

### **The Government's response**

2a.12 The Government would expect that any Verifier should be clearly and demonstrably independent. If the Verifier's independence could not be established, then the Secretary of State would not be able to rely on the Verifier's report. Instead the Secretary of State would commission further advice and recover the cost of that advice from the Operator.

2a.13 Operators are likely to appoint more than one Verifier in order to meet the various competences expected for verification. Operators could appoint more than one Verifier to widen the pool of suitably qualified persons that they could engage with, for example, by appointing a technical Verifier with direct knowledge of the specific technical content contained within the DWMP and a financial Verifier with specialist knowledge regarding the financial content of the FAP.

2a.14 The Verifier should have experience under the appropriate regulatory standards (be they financial or safety/environmental). They should be able to demonstrate to the Secretary of State their independence from the Operator and the qualifications and experience that make them suited to their role. The Government's view is that a market of suitably qualified Verifiers may emerge as a result of the framework that the Government has put in place for waste and decommissioning financing arrangements.

2a.15 The requirement for verification is to focus on those areas of principal concern to the Secretary of State. In the Annual Report only changes to the cost estimates of the Designated Technical Matters will need to be verified. If the Secretary of State is not content with the Annual Report in so far as it relates to the financing arrangements (or any other aspect), he has powers under the Energy Act to require further information to be provided. Greater emphasis will be placed on the Quinquennial Report, which will need to be verified in full.

### **Comments on proposals for remedial action**

2a.16 Several respondents commented on the importance of ensuring that the Operator is held liable for its liabilities. Some respondents thought that the legal requirements, backed by criminal sanctions, under the Energy Act, provided sufficient assurance. Others expressed concern that the Operator might find ways of avoiding their liabilities, for example by the use of mechanisms such as offshore vehicles.

### **The Government's response**

2a.17 The Government recognises that this is a concern that must be addressed in order to be satisfied that an FDP meets the Objective and ensures that the risk to the taxpayer is remote at all times. As set out in the Guidance, the Operator has a duty under law to meet its decommissioning waste management and waste disposal liabilities. The FDP should set out legally binding and enforceable obligations on an Operator to contribute to the Fund as well as remedial steps to be taken if the Fund becomes, or is at risk of becoming, underfunded.

### **Comments on change in ownership or control of the Operator or site**

2a.18 It was argued that the requirements relating to change of control would have implications for an Operator's investment case and their ability to refinance their investment in the site; an appropriate balance, therefore, needs to be struck. Another respondent commented that it would be helpful to clarify what is meant by change of control. It was also suggested that the Guidance on change of control is a little opaque and could potentially lead to some uncertainty for an Operator regarding its obligations in the event of a change of control.

## The Government's response

- 2a.19 This section of the Guidance has been revised in some respects to aid clarity. In considering whether to approve an FDP, the Secretary of State will need to consider whether the FDP sets out adequate provision to ensure that the Objective continues to be met after a change of control or ownership of the site. The Guidance sets out a non-exhaustive list of circumstances in which a change of control or ownership could take place.
- 2a.20 The Government recognises the potential significance of this for an Operator's investment case. The Government therefore considers that this is an area that might be addressed in a Section 46 Agreement between the Operator and the Secretary of State regarding the manner in which the Secretary of State might exercise his powers under the Energy Act to modify an FDP.

## Comments on Modification of an FDP

- 2a.21 One respondent considered that the clarity of the Guidance would be improved if the definition of what constitutes a Modification was made more explicit. The respondent was also concerned about perceived inflexibility of the approach set out in the Regulations regarding the threshold at which Secretary of State approval is required for technical or operational changes that alter estimates by more than the materiality threshold. The respondent suggested that it might be possible to produce an FDP which could accommodate such changes as a matter of course, without needing to seek approval from the Secretary of State.
- 2a.22 Another respondent commented that the degree of flexibility provided to Operators in the Guidance was likely to maximise the need for future Modifications. The respondent felt that this created a tension with the possible constraints on the power of the Secretary of State under a Section 46 Agreement.
- 2a.23 It was also argued that Modifications that impact significantly on funding, or an Operator's DWMP should be open for public and Parliamentary input and scrutiny.

## The Government's response

- 2a.24 As with the comments on the reporting requirements in the Regulations, the Government notes that an Operator will be required to comply with the provisions of the Regulations, and that the Guidance cannot override those provisions. The Government is considering whether some amendments to the Regulations might be appropriate to address points raised in this consultation and, if so, will publish proposals in due course.

2a.25 As set out above, the FDP is expected to be a complex document with substantial technical and legal content. Consequently, the Government did not consider that it would be appropriate to seek views on proposed Modifications in a public consultation. However, the Guidance now provides a definition for Modification.

# Summary of comments on Part 2b: Decommissioning and Waste Management Plan Guidance

## Comments on structure of the DWMP

- 2b.1 The Guidance specifies that the Secretary of State would expect the DWMP to be divided into three principal phases:
- Phase 1: Pre-generation
  - Phase 2: During the generating life of the power station
  - Phase 3: After the end of generation
- 2b.2 A respondent commented that it is not necessary or desirable to set out Phase 1 pre-generation activities as their view was that these do not have a material impact on the arrangements for decommissioning and waste management. However, another respondent argued that greater prescription is needed for Phase 1.
- 2b.3 The Guidance also sets out a number of elements that an approvable DWMP would be likely to include. One of these elements is a clear timeline showing key milestones and giving scheduling assumptions in each of the three phases set out above. A respondent commented that it is not clear what ‘key milestones’ are to be shown and indeed whether, given the current level of uncertainty, there could be any clarity around what those milestones would be.

## The Government’s response

- 2b.4 As set out in the Guidance, the purpose of requiring an FDP to address Phase 1, the period prior to generation of electricity, is to enable the Secretary of State to be satisfied that an Operator’s FDP submission is consistent with that Operator’s submissions to the planning authorities and nuclear regulators. It also ensures that an Operator sets out a credible route for the disposal of its ILW and spent fuel.
- 2b.5 The Guidance requires an FDP to contain realistic, clearly defined and achievable plans. In order to assist the Secretary of State in reaching a view on this point he would expect to see a clear timeline with key milestones and scheduling assumptions. It is accepted that there is some uncertainty around

these milestones, and the FDP should also contain the Operator's analysis of the sources of risk and uncertainty in their plans.

## Comments on the level of detail in the DWMP

- 2b.6 Some respondents commented that the level of detail required to be included in the DWMP on the Technical Matters, as distinct from the Designated Technical Matters, should not be excessive as the costs are to be met by the Operator from operational expenditure and will not be subject to the terms of the Secretary of State approved FAP. It was suggested that that the Guidance lacks clarity in relation to the information and level of detail that an Operator must set out on non-Designated Technical Matters.
- 2b.7 The Government's response  
The level of detail to be included in the DWMP on Technical Matters should be commensurate with the impact that the activity will have on the level of liabilities. The Guidance sets out that the Secretary of State does not expect the DWMP to provide technical information relating to the day to day running of the station unless this information is material to the estimates of decommissioning and waste management costs. The key consideration is the effect on liabilities at the end of generation and the manner in which these will be discharged. In particular, sufficient detail must be available for there to be clear delineation of Technical Matters and Designated Technical Matters. An Operator should still provide sufficient detail on the Technical Matters to enable the Secretary of State to have confidence that it has realistic, clearly defined and achievable plans.

## Comments on the Base Case

- 2b.8 Respondents who commented on the DWMP Guidance were in many cases supportive of the non-prescriptive approach set out. Some commented that the Base Case assumptions should allow for the maximum amount of flexibility possible. Conversely, it was argued that the conservatism in the Base Case could discourage innovation in the industry.
- 2b.9 On the other hand it was also argued that the Guidance should be more prescriptive since the scope for an Operator to propose alternatives to the Base Case assumptions would create uncertainty for on-site operations and local communities.
- 2b.10 One respondent argued that the assumptions in the Base Case were not sufficiently justified and questioned why there are no alternative assumptions set out in the Base Case.

## The Government's response

- 2b.11 The primary purpose of the Base Case is to set out the key points which the Secretary of State would expect to be addressed in a DWMP that is submitted for approval.
- 2b.12 An Operator will be expected to have regard to the Base Case when developing the DWMP it will submit to the Secretary of State. However, the intention of setting out the Base Case as a number of assumptions is to give the Operator the flexibility to propose and justify alternatives if they choose to do so. If an Operator puts forward a DWMP that is not consistent with the Base Case, the onus will be on the Operator to justify its proposal: the Secretary of State will consider DWMPs based on alternatives to the Base Case on a case-by-case basis.
- 2b.13 If an alternative to a Base Case assumption is proposed, then in order for the Secretary of State to approve it in the FDP, the Operator must demonstrate that the alternative is realistic, clearly defined and achievable, and is capable of being undertaken in a way which is consistent with the requirements and expectations of the relevant safety, security and environmental regulators.

## Comments on the relationship between the Base Case and regulatory requirements

- 2b.14 Several respondents thought that greater clarity was needed regarding the interaction of the FDP (particularly by way of the DWMP) with existing nuclear regulation. The respondents felt that this was important to ensure that any issues regarding duplication, inconsistency and dual regulation were avoided.
- 2b.15 These respondents also felt that there needed to be better explanation of how the regulators fit into the approval process for an FDP, the timing of regulatory engagement with nuclear site licensees and how this sits with the requirements of the draft Guidance. It was suggested that a greater understanding of the relationship with the regulators would be beneficial and that a formalised agreement to work together where necessary throughout the development of an Operator's FDP would be a positive step.

## The Government's response

- 2b.16 The Operator must set out plans in the DWMP for decommissioning of the power station and demonstrate that the management and disposal of waste will be undertaken in line with regulatory requirements. The Government recognises the risk of overlaps and the importance of ensuring clarity with existing nuclear regulation, particularly with regard to the role of the regulators

in approval of an Operator's DWMP. The Government has worked with the regulators at all stages of the development of the legislation and the Guidance and will continue to work with them so that processes are appropriately aligned. This will help to ensure that the plans submitted for approval by an Operator are also consistent with regulatory expectations.

2b.17 However, it is important to recognise that these are two different regimes with different purposes:

- The regulatory regimes exist to ensure the safe management, conditioning and storage of radioactive waste on nuclear licensed sites and to regulate the discharges to the environment and disposal of radioactive waste on or from nuclear licensed sites, and the associated organisational management arrangements.
- The FDP regime exists to ensure that an Operator makes prudent provision for the full costs of decommissioning its installations and their full share of the costs of safely and securely managing and disposing of its waste and that in doing so the risk of recourse to public funds is remote at all times.

2b.18 It is therefore inevitable that there will be some possible overlaps. For example, both regimes require the monitoring, recording and reporting of operational and technical changes. The regulators require this to ensure that adequate records are being kept regarding operation, inspection and maintenance of any safety-related plant. The FDP requires this to ensure that it is kept up to date, with material changes in the specified liabilities being recorded and incorporated into the FDP.

2b.19 Similarly both regimes require the Operator to have a decommissioning plan. For the regulators, this covers arrangements for the decommissioning of any plant which may affect safety and the provision of adequate documentation to justify safety. Therefore the primary focus is on the safety of actions about to be undertaken, rather than the cost of long term future plans. For the FDP, this is to ensure there are sufficient monies to pay for future decommissioning and to protect the taxpayer. A longer time horizon is therefore required for the FDP as a clear picture of long term funding requirements is needed. There is likely to be a clear distinction, especially early on.

2b.20 However, DECC will work with the regulators to minimise duplication, to mitigate risk of conflict and to maintain an aligned approach:

- The Energy Act requires the SoS to consult regulators before initial approval of an FDP and when considering Modifications.



- The FDP Guidance requires the Operator to demonstrate that its plans are consistent with the requirements and expectations of the regulators.

## Comments on specific Base Case Assumptions

### Site end state

2b.21 The consultation set out the Base Case assumption that at the end of decommissioning the condition of the site will be restored to a state similar to “Greenfield”, or similar to its state prior to construction. Some respondents thought that it was unnecessary to specify “Greenfield” as it was not necessarily the appropriate key driver for the end state. These respondents felt that it would be sufficient for the Guidance to specify that the end state of the site will be such that allows the site to be released from the control of the nuclear site license and any other relevant legal requirements. It was suggested that the details of remediation and de-licensing will be site specific.

### The Government’s response

2b.22 The Government recognises that the details of decommissioning will be site specific and that the site end state will be influenced by its previous and likely future use. It is also recognised that in practice the site end state achieved at the end of decommissioning will be that agreed with the regulators and the planning authority. However, at the outset, an assumption is required in the FDP as to the site end state, in order for the Operator to produce a robust decommissioning cost estimate. The Base Case assumption that that the site is restored to “a state similar to Greenfield or similar to its state prior to construction” is a prudent assumption, particularly at the outset.

### Station operating lifetime

2b.23 Several respondents argued that the Base Case assumption of a single station operating for 40 years should be changed to 60 years. They commented that all current designs undergoing Generic Design Assessment (GDA) have been designed for an operational life of 60 years and that in all likelihood this is the station life that Operators will propose in their FDPs as an alternative to the Base Case assumption. However, other responses considered that an assumed 40 year operating life was sensible for funding purposes, based on what companies may need to accrue in terms of funding for waste costs. It was suggested that account should be taken of the operating life that has been achieved for existing power stations.

## The Government's response

- 2b.24 The Government's view, based on experience to date, is that 40 years remains a prudent reactor life assumption for the purposes of making prudent provision for decommissioning liabilities.
- 2b.25 However, the Government recognises that most current station designs, including those undergoing the GDA, anticipate an operational life of at least 60 years and recognises also that prospective new nuclear operators are likely to plan on the basis of a 60 year reactor life.
- 2b.26 For an FDP based on a 60 year reactor life to be approvable as representing prudent provision, it would need to contain robust mechanisms to ensure that there would be sufficient funds to meet the costs of decommissioning, waste management and waste disposal in the event that the power station did not achieve its anticipated lifetime. The Operator would also be expected to demonstrate that uncertainty over reactor life had been properly allowed for in the FDP as a whole, including in those elements of the FAP which are dependent on assumptions around reactor lifetime.

## Construction and maintenance of interim stores

- 2b.27 Several respondents commented on the assumption that the Operator should provide interim storage facilities for ILW and spent fuel on the site of the power station. These respondents felt that it would be inefficient for each power station to have its own interim stores and that a better approach would be to develop national or regional facilities, or central facilities as part of the GDF infrastructure. It was suggested that assuming individual on-site facilities for storage would be likely to result in over contribution to Operator Funds (particularly in the early stages of operation) to address the costs of individual facilities. These respondents therefore proposed that the Guidance should allow the Operator to consider transferring waste away from the power station sites during operation to some form of central storage. Conversely, it was argued that there was no evidence to back up the assumption in paragraph 2b.31 of the draft Guidance that regional or central facilities for storage of spent fuel should lead to significant reductions in waste management costs.
- 2b.28 It was also suggested that the costs of constructing the interim stores should not be classified as Designated Technical Matters.

## The Government's response

2b.29 In the absence of alternative proposals, the Government expects the Operator to proceed on the basis of the prudent assumption that ILW and spent fuel produced by a new nuclear power station will have to be stored on-site pending final transport and disposal in a GDF. However, the Government does not wish to preclude an Operator or others proposing alternative arrangements for the management of waste and spent fuel, for example in a centralised or shared Interim Storage facility which could reduce the on-site storage period, if a site or a number of sites can be identified and the necessary regulatory and planning permissions obtained. In the event that offsite storage facilities were to become available, then any consequent reductions in waste management costs would be reflected in the FDP at that time.

2b.30 The construction and maintenance of interim stores are classified as Designated Technical Matters (in the Order arising under the Energy Act<sup>10</sup>). These are significant costs and designation ensures that money is available to carry out the relevant work, which could otherwise be competing with revenue-generating activities and might not get prioritised.

## Encapsulation of spent fuel

2b.31 A number of respondents commented on the Base Case assumption that, in the absence of proposals for centralised packaging facilities, encapsulation of spent fuel is carried out on the originating site. Several commented that this did not seem a sensible or practical assumption as it implied the construction of a complex and expensive facility on each site. It was suggested that it would be more efficient and realistic for the Government to develop a single central facility.

2b.32 However, other respondents raised concerns about the implications of future centralised encapsulation facilities, for example suggesting that this implied that such a facility would be on the site of a GDF and asking whether this would have an impact on the Managing Radioactive Waste Safely (MRWS) process.

A number of responses noted that the specification for the packaging of spent fuel for disposal is currently uncertain. Some were keen to ensure that flexibility was maintained to allow for technological improvement, while others saw this uncertainty as a source of concern, particularly for local communities.

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<sup>10</sup> The Nuclear Decommissioning and Waste Handling (Designated Technical Matters) Order 2010 (SI 2010/2850) came into effect on 30 November 2010.

## The Government's response

2b.33 The Government considers that the Operator should be responsible for ensuring spent fuel is disposable in the GDF and should make provision for this in its FDP. The Government recognises that the specification of encapsulation (or other suitable spent fuel pre-disposal treatment) is dependent on the design and operational requirements of the GDF and the Government will work with the Operator to ensure these are optimised in light of the requirements of both legacy and new nuclear Operators.

2b.34 The Base Case requires the encapsulation of spent fuel, either directly by the Operator or by a third party under contract to the Operator. Operators will need to make full provision for the costs of encapsulation. Operators of more than one site may be able to make a case in the future that those sites may be able to make use of shared processing facilities, subject to gaining all necessary regulatory and planning permissions.

## Management and disposal of spent fuel

2b.35 A number of respondents commented on the Base Case assumption that new nuclear power stations will use uranium or uranium oxide fuel. There were some comments that the consultation did not reference the DECC consultation on plutonium management which sets out that the Government's preliminary view that the best prospect of delivering a long-term solution for plutonium management is through a reuse as mixed oxide (MOX) fuel.

2b.36 The assumption for the Base Case is that there will be no reprocessing of spent fuel and several respondents commented that they wanted the possibility of spent fuel being reprocessed to be recognised to allow for flexibility. Some respondents commented that technical advances are likely to make reprocessing an attractive option for an Operator at some stage during the lifetime of the power station or during decommissioning afterwards.

## The Government's response

2b.37 The Base Case assumptions remain that new nuclear power stations will use uranium or uranium oxide fuel and that there will be no reprocessing of spent fuel. As with all Base Case assumptions it is open to an Operator to propose an alternative to the Base Case of using other fuels such as mixed oxide fuels. An Operator would require the Secretary of State's approval for such a proposal.

## Comments on the “Early Transfer” of title to and liability for an Operator’s waste

- 2b.38 The consultation document set out that in the event that an Operator expects to transfer its waste to Government before the Assumed Disposal Date, described as “Early Transfer”, that Operator’s DWMP should clearly set out the steps expected to take place after the Transfer Date and the cost of those steps and state that these costs could be covered by a Lump Sum Payment from the Operator to Government on the Transfer Date.
- 2b.39 Some respondents argued that the extended time period (up to 50 years) between the Transfer Date and the Assumed Disposal Date presented the taxpayer with unacceptable cost risks. It was also suggested that uncertainty over the Assumed Disposal Date could entail significant extra costs if extended Interim Storage was required.
- 2b.40 Several respondents addressed the proposal that discounting should be applied when determining the payments made by an Operator on the Transfer Date to cover both the Waste Transfer Price and the Lump Sum Payment. Some highlighted the cost risk that uncertainty over the discount rate would present to an Operator and sought clarity over how the discount rate will be determined. Others saw risks in relying on long term discounting over such an extended period. It was suggested that the only way to guarantee that the Operator pays the full costs of Interim Storage is to charge them the actual cost.

### The Government’s response

- 2b.41 As set out in the Guidance, “Early Transfer” does not affect the obligations placed on an Operator by the Energy Act to set out the steps to be taken to decommission the power station and manage and dispose of its waste. In the event that title to and liability for an Operator’s waste transfers to Government before the Assumed Disposal Date, the Operator’s plan to manage and dispose of the waste will transfer to Government on the Transfer Date, together with sufficient assets to carry out the plan, in the form of a Lump Sum Payment. The Secretary of State will expect the Operator’s waste management plans for the period between the Transfer Date and the Assumed Disposal Date to be of the same standard of robustness and prudence as its plans for the period before the Transfer Date.
- 2b.42 The Lump Sum Payment would be a full and final payment for all remaining waste management costs (including the decommissioning of interim stores if necessary). The level of the Lump Sum Payment would not be set at the

outset but instead would be estimated in the Operator's FDP and regularly reviewed. The Government recognises that at present there is uncertainty over these waste management costs, but acknowledges that this should reduce over time. By the Transfer Date it should be possible to estimate these costs with a much higher degree of confidence. Notwithstanding this, under this approach the Government would expect an Operator's provision to be based on a conservative, evidence-based, estimate of the waste management costs and would expect the Lump Sum Payment to include a commensurate risk premium to compensate the taxpayer for taking on the risk of subsequent cost escalation.

2b.43 The Government recognises that the discount rates applied to the level of the Waste Transfer Price, if the Transfer Date falls before the Assumed Disposal Date, could have a significant impact of the level of an Operator's financial provision for its waste disposal liabilities. The discount rate will not be fixed at the outset. Rather it will be determined nearer the Transfer Date and set in relation to the rates of returns at that time on long-term investments in Government securities and similar assets. It is expected that the manner in which the discount rate will be determined will be set out in the Waste Contract between the Government and the Operator. The Government will provide the Operator with an estimated long-term discount rate to enable prudent provision to be made.

# Summary of comments on Part 2c: Funding Arrangements Plan Guidance

## Comments on Content of the FAP

- 2c.1 A small number of respondents raised questions around this section of the Guidance given that the FDP will be a legally binding document. It was suggested that some of the information required, such as “background information”, should not be included within the FDP and that this and other material, such as information relating to Fund governance, should be provided separately by way of supporting material.

### The Government’s response

- 2c.2 This section of the Guidance, as elsewhere, is not intended to be prescriptive. As set out in the Guidance, it is for an Operator to decide how to structure its FAP. The Government considers that there are some elements that are likely to be essential within every FDP, but the Government recognises that it may be acceptable for other material, such as background and explanatory information, to be provided in supporting documents rather than within the FDP itself.

## Comments on Creation of the Fund

- 2c.3 Clarification was sought regarding an apparent discrepancy between the requirement in this section that the Fund should be created by the time the reactor core is taken critical for the first time (First Criticality) and the implied requirement elsewhere in the Guidance that the Fund should be established prior to submission of an FDP to enable the Fund to comment on that submission.

### The Government’s response

- 2c.4 The Government has revised the Guidance to clarify this point. Prior to the submission of an FDP the Government would expect the Operator to begin identifying individuals who it expects subsequently to be appointed to the Fund and for these individuals to formulate views on the arrangements set out in the FDP. However the Government would not expect to see the Fund formally established prior to FDP approval. The Guidance identifies a number of areas where the Secretary of State would wish to know the views of these individuals in relation to proposed FDP provisions.

2c.5 Between approval of an FDP and First Criticality at the power station, the Fund will need to be capable of performing a limited set of its functions, for example in relation to annual and quinquennial reporting and Modifications to an approved FDP. The Operator may wish to propose some form of transitional arrangements to cover this period, for example that a reduced number of appointments to the Fund are made.

### Comments on Structure of the Fund

2c.6 There was widespread support for the requirement that the Fund should be insolvency remote, but a number of queries or concerns were raised about how this should be implemented in practice, with further details sought.

2c.7 With regard to the location of the establishment of the Fund, a number of respondents agreed with the draft Guidance that establishing the Fund outside of the jurisdiction of the Energy Act could reduce insolvency remoteness, for example by making the Fund vulnerable to changes in local insolvency law. One respondent called for the express prohibition of the possibility of a Fund being established outside of the jurisdiction. Another respondent suggested broadening the Guidance to allow for alternative funding structures which could be structured so as to still satisfy the insolvency remoteness requirements.

2c.8 Several responses drew attention to the long time periods over which an FDP would be in place, and expressed doubt as to whether the Government would be able to guarantee that all necessary funding was in place in the event of Operator or Associated Company insolvency.

### The Government's response

2c.9 The Government recognises the importance of ensuring that the assets in an Operator's Fund are protected in the event of the Operator's insolvency in order to ensure that the FDP meets the Objective in ensuring that the risk to the taxpayer is remote at all times. The Government maintains the view that establishing the Fund within the jurisdiction(s) to which the Energy Act applies would assist in meeting the principle in relation to insolvency remoteness of the Fund.

2c.10 The Government acknowledges that the long lifetime of an FDP increases the importance of ensuring robust arrangements and notes that one of the Guiding Factors is that the FDP must be a durable arrangement. It will be for an Operator to demonstrate in its FDP that its proposals guarantee the security of the Fund Assets in the event of Operator insolvency.



## Comments on the role, ownership and governance of the Fund

- 2c.11 A number of detailed points were made on these sections, primarily by those organisations now involved in detailed preparations to establish a Fund. Comments focused in particular on ensuring that the role of the Fund is clearly defined and that the Fund is not given obligations that should properly lie with an Operator. For example it was argued that it should be made clear that the Fund should not be liable for any Fund Asset insufficiency.
- 2c.12 With regard to the Guidance's requirements on independence of those persons appointed to a governance role (except for those appointed in a non-independent role), some concern was expressed that in view of the relatively small pool of potential candidates with relevant nuclear expertise, it could be difficult to identify suitably qualified candidates who met the independence criteria.
- 2c.13 Another response drew comparison with the circumstances surrounding the Government's intervention to support British Energy and urged the Government to learn lessons from the manner in which those liabilities were monitored and financial provision made.
- 2c.14 A number of respondents stated that the proposed restriction or prohibition relating to the Fund's ability to borrow money or issue securities should not preclude short term borrowing where required to maintain adequate cashflow in the Fund to perform its functions effectively where the terms of the borrowing arrangements are contained within the FDP.

### The Government's response

- 2c.15 The Government regards the Fund as a key part of the framework that will ensure that the Objective and Guiding Factors are met, but acknowledges that the Operator will be ultimately responsible for discharging its own liabilities. The Government agrees that it will be essential for the role of the Fund to be clearly set out in the FDP. It will be for the Operator to set out its proposed Fund structure to the Secretary of State for approval. The Government does not wish to be unduly prescriptive as to the legal structure for the Fund. Furthermore, it is not the Government's intention to set out the relative advantages and disadvantages of possible vehicles which may be suitable for the Fund.
- 2c.16 The Government regards independence of the persons responsible for the Fund to be an important principle in ensuring a robust and durable FDP. The Secretary of State would expect the individual to be independent of the Operator according to principles at least as stringent as those set out in the

Independence Principles<sup>11</sup> of the UK Corporate Governance Code. The Secretary of State considers it likely that some of these individuals be appointed in view of their expertise in nuclear energy. It is recognised however that the number of suitable candidates may be limited and this constraint can be taken into account in the assessment of independence of those individuals.

2c.17 The Guidance requires that the prospects of the Fund becoming insolvent should be remote and would expect the FDP to prohibit or restrict the Fund from borrowing money or issuing securities. The Government considers that it will be the responsibility of the Operator to ensure that the Fund is able to discharge its functions without recourse to borrowing.

### **Target Value for the Fund Assets and contributions to the Fund**

2c.18 A number of responses commented on the long time period over which an FDP will be in operation and stressed the importance of an Operator being able to meet its liabilities without recourse to the taxpayer.

2c.19 Some respondents drew attention to the range of uncertainties around decommissioning and waste management costs and to previous experience of increases in decommissioning costs estimates over time. Some doubt was also expressed about basing FDP financial provision on the expectation of real terms growth in investments over the long term, given recent experience. One response suggested that an FDP should not rely on payments over the lifetime of the station but should seek a full payment at the outset.

2c.20 Greater clarity was sought as to what would constitute prudent assumptions for the purposes of determining the Target Value for the Fund, with some questions around what would constitute a “prudent risk based contingency”.

2c.21 Clarification was also sought regarding the requirement in the draft Guidance that payments to the Fund should be serviced before debt and/or other costs as appropriate. It was argued that on safety grounds, operating costs relating to running a nuclear power plant should be prioritised over all other payments, including those to the FDP.

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<sup>11</sup> The relevant principles are currently contained section B.1.1 of the UK Corporate Governance Code, <http://www.frc.org.uk/corporate/ukcgcgcode.cfm>

## The Government's response

- 2c.22 The Government acknowledges that there is considerable uncertainty around the likely costs of decommissioning, waste management and waste disposal but considers that this can be handled through the FDP framework. In particular the Government has set out in this Guidance a Base Case, a generic lifecycle plan for new nuclear power stations in order to assist with the development and costing of a DWMP. An Operator is expected to set out cost estimates in the DWMP that take due account of risk and uncertainty. An Operator will also be required to set out its analysis of risk and uncertainty. This analysis will be an important input into the determination of the prudent risk-based contingency element of the Target Value for the Fund. These cost estimates will be subject to independent verification and regular review.
- 2c.23 The Government believes it is reasonable to allow Operators to assume real terms investment growth in the monies held in its independent Funds. However the risk around Fund performance lies with the Operator, not the Government and if its Funds do not grow as expected an Operator would be required to take corrective action to top-up its Fund(s). Therefore the Government would expect the determination of the Target Value for the Fund to take due account of uncertainty around likely investment returns.
- 2c.24 The Government's view remains that payments to the Fund should be viewed as an essential matter during operation which must take priority over debt and/or other costs and any returns made to equity holders. However the Government accepts that there may need to be exceptions to this priority for certain limited classes of operational, safety and security related expenditure. The Government would expect details on these classes of expenditure to be set out in the FDP and would expect to seek the views of the regulators with regard to payments identified by an Operator as essential on safety, security or environmental protection grounds.

## Comments on Investment strategy

- 2c.25 One respondent argued that the Investment Strategy was too prescriptive and would require frequent reversion to the Secretary of State for the approval of a Modification. Another suggested that the Fund's role was too broad and should be limited to ensuring compliance with the Investment Strategy. Other responses argued that the long timeframes meant that investment returns were very uncertain and were impossible to predict, noting that even small variations in assumptions would have a very large impact.

2c.26 Some respondents referred to recent events in financial markets. It was suggested that a more conservative approach was needed than might have previously been considered necessary, for example that Fund Assets should be distributed across a range of financial institutions to reduce risk arising from the possible failure of such institutions in the future.

### **The Government's response**

2c.27 The Government has noted the general support for a principles-based approach to this Guidance and in view of this has made some changes to the section on Investment Strategy to ensure consistent application of this approach. However in doing so, the revised Guidance is clear that there are a number of key principles that need to be addressed in the Investment Strategy. In particular the Government would expect the Investment Strategy to contain provisions in relation to the Fund's investment objectives, decision making and risk management policies. The Government would also expect clear provisions regarding permitted and prohibited assets or classes of assets.

2c.28 The Government accepts that there is uncertainty over investment returns. The provisions for quinquennial reviews of the FDP will include a review of investment performance against expectations. In the event that investment returns are different from those expected, a revised contribution schedule will need to be determined in order to ensure that the Fund remains on track.

### **Comments on payment and disbursement policy**

2c.29 One respondent stated that the Fund's responsibility should be limited to ensuring compliance with the relevant FDP mechanisms. Another respondent suggested triennial reporting should be required instead of annual reporting during the decommissioning period.

### **The Government's response**

2c.30 The Government would expect the FDP to set out clearly the role of the Fund with regard to disbursements from the Fund, with safeguards in place to ensure that assets are disbursed only in line with the FDP. The Government's view is that regular reviews of the FDP are important to ensure Fund Asset sufficiency. The Government would expect both the expected costs and performance of the Fund to be properly monitored throughout the lifetime of the FDP including during the decommissioning period.

## Comments on sufficiency of Fund and protections against an insufficient Fund

- 2c.31 It was suggested by one respondent that the obligation to ensure Fund Asset sufficiency should be amended in light of the view held by that respondent that the Fund cannot of itself ensure such sufficiency. It was suggested that early decommissioning risk should not include political risk, meaning that Operators should not be responsible for the risk of political change.
- 2c.32 Respondents raised a range of comments regarding options for providing security against an insufficient Fund. One respondent suggested that the insurance and financial services markets have the products and capacity available to help ensure taxpayer protection from the majority of risks related to FDP insufficiency. Another queried why parent company guarantees would not, on their own, be an acceptable form of security. As to the alternative forms of security which may be acceptable to the Secretary of State, in relation to the possibility that an Operator may choose to offer security over cash flows from the site as one element of security, it was suggested that the terms of such an arrangement would have to be agreed in advance. The provision of security over cash flows would need to be conducted in such a way as to preserve the Operator's financial health, while ensuring that safety at the site is not compromised.
- 2c.33 Several respondents raised points concerning the provision in the amended Section 46 of the Energy Act, under which the Secretary of State might enter into an agreement with an Operator regarding the exercise of his powers to modify an FDP. Further clarity was requested by one respondent regarding the rights of the Secretary of State to impose obligations on Associated Companies. It was felt that neither the Energy Act nor the Guidance provides sufficient clarity in this regard. Another respondent commented that the obligations and impact on an Operator's shareholders should be clarified. Concern was raised in a different response that the constraints on the Secretary of State's powers might mean that the Government would not have the necessary powers or sufficient time, to take the action required to avoid the risk of Fund insufficiency.

### The Government's response

- 2c.34 As with the rest of the Guidance, this section is not intended to be prescriptive. However, the Government regards the Fund as a key part of the framework that will ensure that sufficient monies are available to meet the Operator's liabilities. It will be for an Operator in its FDP to set out the mechanisms that will be in place to ensure this is achieved. In line with the non-prescriptive nature of the Guidance, there will be flexibility as to how protection against an

insufficient Fund can be provided with a case-by-case analysis by the Secretary of State, drawing on advice from the NLFAB. The Government would expect an Operator's FDP to clearly identify major project risk and take due account of risk and uncertainty in preparing robust cost estimates.

2c.35 With regard to the various types of security that might be acceptable, the Government continues to encourage potential Operators, the financial industry and insurance bodies to explore potential packages and stimulate interest in developing suitable insurance products.

2c.36 It is the Government's view that parent company guarantees may be able to provide sufficient security as part of a combination of security measures, but maintains that such guarantees on their own are unlikely to provide sufficient taxpayer protection. With regard to security being provided in the form of security over future cash flows, the Secretary of State would expect to be satisfied that such security was robustly ensured and enforceable when required.

2c.37 With regard to the provisions in the amendment to Section 46 enabling the Secretary of State to enter into an agreement with the Operator, the Secretary of State may not make such a Section 46 Agreement or amend such an agreement unless satisfied that the Section 46 Agreement includes adequate provision for the Modification of the FDP in the event that the provision made by it for the Technical Matters (including the financing of the Designated Technical Matters) ceases to be prudent. Therefore the Government does not consider that this will prevent necessary action to protect against the risk of Fund insufficiency.

### **Comments on Winding up of the Fund**

2c.38 It was suggested that the effect of Early Transfer on the provisions around winding up of the Fund should be addressed, as it could enable the Fund to be wound up before completion of all decommissioning.

### **The Government's response**

2c.39 The Government agrees that this section of the Guidance should recognise this point and has amended the Guidance accordingly.

## Glossary

**Annual Report** – means a report compiled by an Operator on an annual basis as part of its record keeping processes as set out in section 2a of the Guidance.

**Associated Company** – means an associated body corporate within the meaning of section 67 of the Energy Act 2008.

**Assumed Disposal Date** – means the Government's best estimate of the date on which disposal of the Operator's waste will begin. The Assumed Disposal Date will determine the duration of Interim Storage of waste pending disposal for which the Operator will be required to make financial provision.

**Base Case** – means the steps set out in Part 2b of this Guidance for waste management, disposal and decommissioning that the Government considers should be included in and costed as part of the FDP that Operators will need to submit to the Secretary of State for approval.

**Conditioning** – means any process used to prepare waste for long-term storage and/or disposal.

**Decommissioning** – means dismantling the station and remediating the site including waste management but not including waste disposal to a condition agreed with the regulators and the planning authority.

**Decommissioning and Waste Management Plan (DWMP)** – means the part of the FDP which sets out and costs the steps involved in decommissioning a nuclear power station and managing and disposing of hazardous waste and spent fuel in a way which the Secretary of State may approve as described further in paragraph 1.9 of the Guidance.

**Designated Technical Matters** – has the meaning given by section 45(6) of the Energy Act 2008 and the Order.

**DWMP Guidance** – means the Guidance set out at Part 2b of this document.

**Early Transfer** – means a situation where the Transfer Date (on which the Operator's responsibility for the waste transfers to Government) precedes the Assumed Disposal Date.

**Encapsulation** – means the packaging of spent fuel in a manner acceptable for disposal in a GDF.

**Energy Act** – means the Energy Act 2008.



**First Criticality** – means the date on which any reactor core of the nuclear power station is taken critical for the first time.

**Fund** – means a trust or other vehicle constituted for the purpose of accumulating, managing and investing monies obtained from the Operator for the purpose of the Objective and includes, as the context permits or requires, any person who is a member of, or is responsible for the governance and/or management of that entity.

**Fund Assets** – means financial assets held by the Fund for the purpose of the Objective.

**Funded Decommissioning Programme (FDP)** – means the programme that any Operator of a new nuclear power station will need to have approved by the Secretary of State pursuant to the Energy Act before construction begins and to comply with thereafter.

**Funding Arrangements Plan (FAP)** – means the part of the FDP which sets out the Operator's detailed plans for one or more Funds to deliver sufficient moneys to meet the costs of the Designated Technical Matters identified in the Operator's DWMP, as described further in paragraph 1.10 of the Guidance.

**Generating lifetime** – means the period beginning with the date on which the power station first generates electricity for supply to the grid, and ending with the date on which the reactor is shut down with no intention of further use for the purpose of generating electricity.

**Generic Design Assessment** – means the generic assessment being undertaken by the Office for Nuclear Regulation and the Environment Agency of the suitability of new reactor designs for use in the UK.

**Guidance** – means the guidance set out in Parts 1, 2, 2a, 2b and 2c of this document.

**Guiding Factors** – means the factors set out in paragraph 1.7 of this Guidance, which the Secretary of State will consider when considering whether to approve, to approve with conditions or whether to modify an FDP which has already been approved.

**Hazardous waste** – has the meaning given by section 37 of the Energy Act 2004.

**Interim storage** – has the meaning given to it in the Order.

**Intermediate level waste (ILW)** – has the meaning given to it in the Order.

**Investment Strategy** – means the investment strategy set out in the FAP as described in paragraphs 2c.51 to 2c.57 of the Guidance.



**Modification** – Any change to an approved FDP.

**Nuclear Liabilities Financing Assurance Board (NLFAB)** – means the independent advisory body, and any successor body, who will provide impartial scrutiny and advice to the Secretary of State on the suitability of FDPs submitted by Operators of new nuclear power stations.

**Nuclear Power Station** – means a licensed site with one or more nuclear reactors being operated for the purposes of generating electricity

**Objective** – means the Objective set out in paragraph 1.6 of Part 1 of the Guidance.

**Operator** – means the legal person who holds a licence under the Nuclear Installations Act 1965 in relation to the site to which the FDP relates, or who has applied for such a licence in relation to such a site.

**Operator's liabilities** – means those liabilities set out in Part 2b of the Guidance which the Fund is required to meet being the sum of the designated technical matters.

**Order** – means the Nuclear Decommissioning and Waste Handling (Designated Technical Matters) Order 2010.

**Quinquennial Report** - means a report compiled by an Operator on a five yearly basis as part of its record keeping processes, as set out in section 2a of the Guidance.

**Radioactive waste** – has the meaning given the Environmental Permitting (England and Wales) Regulations 2010.

**Regulations** – means Nuclear Decommissioning and Waste Handling (Finance and Fees) Regulations 2011.

**Section 46 Agreement** – means an agreement entered into by the Secretary of State and an Operator of a new nuclear power station pursuant to Section 46 of the Energy Act 2008 (as amended by section 106 of the Energy Act 2011), under which the Secretary of State agrees to exercise, or not exercise, his power to propose Modifications under section 48 of the Energy Act in a particular manner or within a particular period.

**Security** – means that security provided under section 45(7) of the Act to meet the costs of the designated technical matters, which this Guidance assumes will, at a minimum, constitute assets held in an independent fund and alternative forms of financial or other security may be considered in addition.

**Spent fuel** – has the meaning given to it in the Order.

**Target Value** – means the value or sum which the Fund is required to achieve under the terms of the approved FDP.

**Technical Matters** – as set out in section 45(5) of the Energy Act, the technical matters, in relation to a site, are—

(a) the treatment, storage, transportation and disposal of hazardous material (within the meaning of section 37 of the Energy Act 2004 (c. 20)) during the operation of a nuclear installation on the site;

(b) the decommissioning of any relevant nuclear installation and the cleaning-up of the site; and

(c) activities preparatory to the matters mentioned in paragraph (b);

and for the purposes of paragraph (a) a nuclear installation is not to be regarded as being operated at a time when it is being decommissioned.

**Transfer Date** – means the date, or schedule of dates, upon which the Operator's responsibility for managing the waste pending disposal will transfer to the Government.

**Uranium** – means a heavy, naturally occurring and weakly radioactive element, commercially extracted from uranium ores. By nuclear fission (the nucleus splitting into two or more nuclei and releasing energy) it is used as a fuel in nuclear reactors to generate heat.

**Waste management** – means:

a) treating, storing and transporting ILW and spent fuel pending disposal pursuant to the schedule agreed with the Government;

b) treating, storing, transporting and disposing of Low Level Waste;

c) treating, storing, transporting and disposing of non-radioactive hazardous waste; and

d) planning undertaken during the generating life of the station or subsequently which is necessary in order to carry out decommissioning.

**Waste Transfer Price** – the price paid by an Operator of a new nuclear power station in return for the Government taking title to and liability for their ILW and spent fuel, under the terms of a Waste Contract.

## Annex A: List of those who responded to the consultation

There were 36 written responses to this consultation. Two respondents requested non-disclosure of their responses. The other respondents are listed in alphabetical order.

1. Allison, Wade
2. Ashurst LLP
3. Attwater, Katy
4. Barkham, Hazel
5. Blackwater Against New Nuclear Group
6. Copeland Borough Council
7. Cumbria County Council
8. EDF Energy
9. Energy Solutions EU Ltd
10. Gerrard, Brian
11. Gifford, Chris
12. Grahame, Lesley
13. Greater Manchester SERA
14. Greenpeace
15. Holmes, Adrian
16. Horizon Nuclear Power Services Ltd
17. Isle of Anglesey County Council
18. John Busby Limited
19. Kick Nuclear
20. L2 Business Consulting Ltd
21. Manson, Piers
22. Northern Ireland Environment Agency, Natural Heritage
23. Nuclear Free Local Authorities
24. Nuclear Industry Association
25. Nuclear Legacy Advisory Forum
26. Nuclear Risk Insurers Ltd.
27. NuGeneration Limited
28. Oldbury Site Stakeholder Group
29. Sedgemoor District Council and West Somerset Council
30. South West Against Nuclear
31. Structured Product Solutions LLP
32. Sullivan, Keith
33. Viesnik, Daniel
34. Welsh Assembly Government

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Department of Energy & Climate Change  
3 Whitehall Place  
London SW1A 2AW  
[www.decc.gov.uk](http://www.decc.gov.uk)