

THE ENERGY ACT 2008

Consultation on revised Funded Decommissioning Programme Guidance for New Nuclear Power Stations

December 2010

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Introduction and background to this consultation

1. In February 2008 the Government published for public consultation draft Guidance on what an approvable Funded Decommissioning Programme (FDP) should contain¹. A total of 43 formal written responses to the consultation were received². The respondents included: energy suppliers; nuclear industry organisations; environmental organisations; public sector organisations; advisory organisations; individuals and other interested parties.
2. The Government's response was published in September 2008³. The comments received generally showed support for the proposals, which were seen, on the whole, as a sensible and practical way forward. Since 2008 there have been some significant developments with regard to the framework that the Government is putting in place concerning the financing of decommissioning, waste management and waste disposal - the Energy Act 2008 has come into effect⁴ and the Government has consulted on draft Regulations and a draft Order⁵ arising under the Act⁶. 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 operator⁷.
3. Also over this period the prospective nuclear operators have been developing their approach to the FDP as their development plans have progressed. The Government has engaged in discussions with the three prospective new nuclear consortia – NNB GenCo (a joint venture of EDF and Centrica), Horizon Nuclear Power (a joint venture of E.ON UK and RWE npower) and NuGeneration Ltd (a joint venture of Iberdrola, GDF Suez and SSE). The purpose of these discussions was to establish whether, as a result of the work the consortia have undertaken preparatory to the submission of an FDP, they had new or different views since they responded to the previous consultation in 2008. We asked all three consortia to write to us following these

¹ <http://webarchive.nationalarchives.gov.uk/+http://www.berr.gov.uk/files/file44486.pdf>

² <http://webarchive.nationalarchives.gov.uk/20090103073128/http://www.berr.gov.uk/energy/sources/nuclear/consultations/closed-response/fdp-responses/page48057.html>

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

⁴ http://www.decc.gov.uk/en/content/cms/legislation/energy_act_08/energy_act_08.aspx

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

⁶ http://www.decc.gov.uk/en/content/cms/consultations/nuc_dec_fin/nuc_dec_fin.aspx

⁷ http://www.decc.gov.uk/en/content/cms/consultations/waste_trans/waste_trans.aspx

discussions detailing their views. We have published these letters alongside the revised Guidance⁸. Given these considerations the Government thought it desirable to undertake a further round of public consultation.

4. While it is not considered that the changes made to the Guidance since the 2008 consultation are significant enough to give rise to many fresh issues, there is the possibility that the changes made may lead stakeholders to have new or different views to those given in response to the previous consultation in 2008.
5. The finalised Guidance is expected to be published in spring 2011 and will assist operators in understanding their obligations under the Energy Act 2008. The Act requires operators of new nuclear power stations to have an FDP approved by the Secretary of State of Energy and Climate Change in place before construction of a new nuclear power station begins and to comply with this FDP thereafter.
6. The Guidance is not intended to be unduly prescriptive but will instead set out principles which the Secretary of State would expect to see satisfied in the FDP prepared by an operator. The Guidance gives information on ways in which the operator might satisfy those principles.
7. During the period of this consultation the Government is considering amending the Secretary of State's power under the Energy Act 2008 to modify an operator's FDP to ensure that there is an appropriate balance between the Secretary of State's powers to protect the taxpayer and the operator's need for clarity over how those powers will be exercised⁹. This Guidance might need to be updated if those amendments are passed.

Structure of the Guidance

8. Part 1 of this 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 2008. Part 1 sets out the Objective of the FDP regime and what is referred to as the Guiding Factors.

⁸ http://www.decc.gov.uk/en/content/cms/consultations/rev_fdp_guide/rev_fdp_guide.aspx

⁹ <http://www.decc.gov.uk/assets/decc/legislation/energybill/544-energy-security-bill-brief-nuclear-operator.pdf>

9. Part 2 of this Guidance sets out information about preparation, content, modification and implementation of FDPs under section 54(5) of the Energy Act 2008.
10. Part 2a sets out Guidance relating to the FDP as a whole.
11. Part 2b sets out the Decommissioning and Waste Management Plan (DWMP) Guidance. This part of the Guidance 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. The Guidance will include a Base Case, which will set out a realistic, clearly defined and achievable way to estimate the potential costs for decommissioning and waste management.
12. Part 2c sets out the Funding Arrangements Plan (FAP) Guidance. This part of the Guidance 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 for approval under the provisions in the Energy Act 2008.
13. The Guidance has been structured in this way to reflect more closely the requirements under both section 54(5) and section 54(6) of the Energy Act 2008.
14. This Guidance uses a number of defined terms. A glossary of such terms is set out at Annex C of this Guidance.

Responding to this consultation

15. We want to hear from members of the public, industry, financial and other institutions that may be involved in the financing of new nuclear power stations, non-governmental organisations and any other organisation or body with an interest.
16. When responding please state whether you are replying as an individual or representing the views of an organisation. If you are responding on behalf of an organisation, please make it clear who the organisation represents and, where applicable, how you assembled the views of members.

How to respond

17. A response form is included at Annex A.
18. The closing date is **8 March 2011**.

Additional copies

19. You may make copies of this document without seeking permission. An electronic version can be downloaded from DECC's website¹⁰.
20. Further hard copies of the consultation document may be obtained from:

Publications Orderline, ADMAIL, 528, London SW1W 8YT
Tel: 0845-015 0010
Fax: 0845-015 0020
Minicom: 0845-015 0030

Confidentiality and data protection

21. Your response may be made public by the Government. If you do not want all or part of your response or name made public, please identify the information which you do not wish to be disclosed. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department of Energy and Climate Change.
22. You should be aware that information provided in response to the consultation, including personal information, may be subject to publication or disclosure in access to information regimes (primarily the Freedom of Information Act 2000 (FOIA), the Data Protection Act 1998 (DPA) and the Environmental Information Regulations 2004).
23. If you want information that you have provided to be treated as confidential, please be aware that, under the FOIA, there is a statutory Code of Practice with which public authorities must comply and which deals with, amongst other things, obligations of confidence.
24. In view of this, it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances.
25. The Department will process your personal data in accordance with the DPA and in the majority of circumstances this will mean that your personal data will not be disclosed to third parties.

¹⁰ http://www.decc.gov.uk/en/content/cms/consultations/rev_fdp_guide/rev_fdp_guide.aspx

Help with queries

26. A copy of the consultation code of practice criteria is set out at Annex B.
27. Please direct any queries about the consultation to our consultation mailbox: decomguidance@decc.gsi.gov.uk or in writing to the address given in Annex A.
28. If you have any comments or complaints about the way the consultation has been conducted (as opposed to comments about the issues which are the subject of the consultation), these should be sent to the DECC Consultation Co-ordinator:

DECC Consultation Co-ordinator
3 Whitehall Place
London
SW1A 2AW
Email: consultation.coordinator@decc.gsi.gov.uk

Next steps

29. We expect to publish finalised Guidance in spring 2011. Responses to the consultation will be taken into account when developing the finalised Guidance.

Complete list of consultation questions

30. This consultation focuses on the consultation questions listed below. When considering responses to this consultation, the Government will give greater weight to responses that are based on argument and evidence, rather than simple expressions of support or opposition. When answering these questions please explain and give reasons for your answers.

Consultation questions

- | | |
|----------|--|
| 1 | Do you agree or disagree that the draft Guidance sets out what an approvable Funded Decommissioning Programme should contain to ensure that operators of new nuclear power stations (i) estimate the potential costs of decommissioning, waste management and waste disposal (i.e. the designated technical matters) and (ii) make prudent provision for meeting their liabilities? What are your reasons? |
|----------|--|

2

Does the draft Guidance contain sufficient information to enable operators of new nuclear power stations to understand the matters that their Funded Decommissioning Programmes should contain?

Description of key changes to the Guidance since the 2008 consultation

31. Since the draft Guidance was published for consultation in February 2008 changes have been made to take account of the responses to the 2008 consultation, additional information received from industry and to reflect further work on refining the policy.
32. The Guidance has also been restructured to make clearer the distinction between:
 - a) those factors which it 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 2008 (Part 1 of this Guidance); and
 - b) further informative Guidance made under section 54(5) of the Energy Act 2008 about preparation, content, modification and implementation of FDPs (Part 2 of this Guidance).
33. The Guidance is intended to be principles-based rather than prescriptive and some of the changes since the 2008 consultation are intended to achieve this. By revising the Guidance to be less prescriptive in certain areas, operators have greater 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.
34. As set out above, the Guidance has been restructured and the drafting in many sections has been revised. We therefore recommend that, where possible, consultees read the revised Guidance (or at least those areas which are of particular interest) in full. The substantive changes since the 2008 consultation include the following:
 - The draft Guidance published for consultation in 2008 stated that the Fund must be independent of the operator meaning the “absence of the ability to control *any aspect* of the structure, governance or operation of the Fund” (emphasis added) and that the governance arrangements

should ensure that the operator does not have influence over the Fund. This requirement is inconsistent with other parts of the Guidance, in particular the ability of an operator to appoint a minority of the directors of the Fund. This Guidance contains revised independence requirements and focuses on the operator's control of (rather than influence over) the Fund. The revised Guidance also makes it clearer that the requirement for the Fund to be independent of the operator does not preclude the operator owning a minority stake in the Fund.

- Operators may wish to develop a number of sites and key elements and security provided in an FAP (as part of an FDP) for each site may be closely related. The revised Guidance states that the Secretary of State would be expected to approve subsequent FDPs for other sites on terms consistent with the first FDP from that operator, where the operator can demonstrate that such an arrangement is advantageous to meeting the Objective (see section on the "Fleet Approach" in Part 1 of the Guidance).
- The draft Guidance published for consultation in 2008 failed to recognise that very substantial overfunding could occur. In the event that the Fund is above its Target Value, the Guidance now allows for the return of surplus of assets during the lifetime of the Fund if it is prudent to do so and is in accordance with the approved FDP.
- The revised Guidance requires a person appointed to a governance role of the Fund to avoid any situation in which that person has an interest that *materially* conflicts with the duties of the Fund (emphasis added). Without a materiality threshold it was industry's view that the test would be too impractical to comply with as, in practice, the nuclear industry is relatively small.
- The revised Guidance provides greater flexibility in the arrangements between the Fund and the operator. The Fund, for example, can set *or approve* (emphasis added) the schedule for contributions to the Fund by the operator, therefore allowing the operator to provide the contribution schedule for approval by the Fund, rather than the Fund being required to set it without input from the operator.
- The revised Guidance includes security over the cash flows from the site as an additional security that may be provided to mitigate the risk of the Fund being insufficient. An operator is however no longer expected to work with the financial and insurance industry to develop financial or insurance instruments where products are currently not available in the

market (see section on “Protection against an insufficient Fund” in Part 2c of the Guidance).

- The revised Guidance now clarifies that the Secretary of State would expect to be informed in advance of any situation where an associated company of the operator ceases to be an associated company, although the FDP may set out circumstances under which the Secretary of State need not be informed of such a change (see section on “Change of ownership or control of the operator or site” in Part 2a of the Guidance).
 - The DWMP Guidance (set out in Part 2b of the Guidance) has been revised to improve clarity and reduce repetition. The substance has not significantly changed from the draft Guidance published for consultation in 2008. For example, the revised Guidance provides more information on the scope, structure and the anticipated level of detail in a DWMP, and more clearly sets out the distinction between the “technical matters” and the “designated technical matters” under the Energy Act 2008.
 - The DWMP Guidance also makes clear that, although the Base Case sets out the main points that the Secretary of State would expect to be addressed in the DWMP, there will be flexibility for operators to propose and seek approval for alternatives. For example, it will be open to operators to justify alternative station lifetimes to the Base Case assumption of an operational life of 40 years. Whatever station life is proposed, the operator must ensure that its FDP is robust against the risk that the site has to be decommissioned earlier than expected.
35. Alongside this consultation, the Government is also publishing a “Consultation on an updated Waste Transfer Pricing Methodology for pricing the disposal of higher activity waste from new nuclear power stations”¹¹.

¹¹ http://www.decc.gov.uk/en/content/cms/consultations/waste_trans/waste_trans.aspx

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

- 1.1. Under section 54(6) of the Energy Act 2008 the Secretary of State must publish guidance about factors which may be appropriate to consider in deciding whether or not:
 - a) to approve an FDP;
 - b) to approve an FDP with modifications or subject to conditions; or
 - c) to make a proposed modification to an FDP or the conditions, subject to which it is approved.
- 1.2. Any operator of a nuclear power station is responsible for dealing with any waste that it produces and ensuring that the site is decommissioned and remediated in accordance with relevant legal and licensing requirements. The purpose of Chapter 1 of Part 3 of the Energy Act 2008 (the Energy Act or the Act) is to establish a regime whereby operators of new nuclear power stations have in place arrangements which make prudent and effective plans for decommissioning such stations, and managing and disposing of the waste that they produce, and that they have arrangements in place whereby they are able to meet the full cost of decommissioning and their full share of waste management and waste disposal costs (i.e. the designated technical matters).
- 1.3. Section 45 of the Act places a duty on a prospective operator of a nuclear power station to submit an FDP to the Secretary of State for approval. Section 45 requires the operator to set out in its FDP its plans and corresponding cost estimates for the designated technical matters, and to provide details of any security provided in connection with meeting those estimated costs.
- 1.4. Under section 54(7) of the Act the Secretary of State must have regard to any Guidance made under section 54 of the Act when making a decision to approve, approve with modifications or conditions, or to modify an FDP. The Secretary of State will call on the advice of the Nuclear Liabilities Financing Assurance Board (NLFAB) in assessing the constituent parts of the FDP.

Objective

1.5. Given the purpose behind Chapter 1 of Part 3 of the Energy Act, the Secretary of State's overriding concern, and therefore the objective of the FDP regime, is to ensure that operators make prudent provision for:

- the full costs of decommissioning their installations; 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 (the Objective). This Objective applies to the FDP regime as a whole.

Approval of the FDP

1.6. When considering whether to approve, to approve with conditions or whether to modify an FDP which has already been approved, the Secretary of State will consider whether such an FDP or modification satisfies the following factors (the Guiding Factors), namely that the FDP:

- provides a clear structure;
- contains realistic, clearly defined and achievable plans for decommissioning, waste management and waste disposal;
- contains robust cost estimates which take due account of risk and uncertainty;
- is transparent;
- contains clear terms and clear divisions of roles and responsibilities;
- is a durable arrangement;
- sets out a Fund structure that demonstrates:
 - a) independence of the Fund;
 - b) measures to ensure sufficiency of the Fund;
 - c) restrictions on the use of Fund Assets; and
 - d) insolvency remoteness.

- 1.7. Operators' proposals will be considered on a case by case basis. It will be for the operator to demonstrate how the FDP meets the Objective and how it complies with each of the Guiding Factors. More detail on each of the Guiding Factors is set out at paragraphs 1.8 to 1.25 below.

Clear structure of the FDP

- 1.8. The Secretary of State would expect an FDP to be divided into two parts. The first part, referred to as the Decommissioning and Waste Management Plan (the DWMP), will fulfil the operator's obligations under sections 45(7)(a) and (b) of the Act by setting out details of the steps to be taken in relation to what are called "technical matters" and the estimates of costs likely to be incurred in connection with the "designated technical matters". As set out in the Act and by Order, "designated technical matters" refer to the decommissioning of the site and the management and disposal of waste arisings. Further details of what the Secretary of State would expect in respect of a DWMP are set out in Part 2b of this Guidance.
- 1.9. The second part, referred to as the Funding Arrangements Plan (the FAP), should set out details of any security to be provided, as required under section 45(7)(c) of the Act, in connection with meeting the estimated costs of carrying out the plans (as set out in the DWMP) for the decommissioning of the site and for the management and disposal of waste arisings (i.e. the designated technical matters). The DWMP is therefore intended to cover all technical matters (including designated technical matters) whereas the contents of the FAP should relate only to designated technical matters. Further details of what the Secretary of State would expect in respect of an FAP are set out in Part 2c of this Guidance.
- 1.10. The purpose of this division is to aid clarity of terms in the FDP. It is not, however, a statutory requirement and an FDP compiled on an alternative basis would be acceptable for the purposes of Act, although it may require additional consideration and therefore may result in a more complicated approval process. The remainder of this Guidance presupposes a structure consisting of a DWMP and an FAP as set out above.
- 1.11. Failure by the operator, or by a body corporate associated with the operator which has obligations under the FDP, to comply with the FDP will be a criminal offence under section 57 of the Act.
- 1.12. Elements of the FDP may be reinforced through, or may include, contractual arrangements between interested parties.

Realistic, clearly defined and achievable plans

1.13. The operator must demonstrate that the plans set out in the FDP for the decommissioning of the site and for the management and disposal of waste arisings are realistic, clearly defined and achievable, and are capable of being undertaken in a way which is consistent with the requirements and expectations of the relevant safety, security and environmental regulators. As set out in paragraph 1.8, the Secretary of State would expect details of these plans to be contained in the DWMP. Further details of what the Secretary of State would expect in this regard are set out in Part 2b of this Guidance.

Robust cost estimates

1.14. The Secretary of State would expect the FDP, by way of the DWMP, to contain effective mechanisms for ensuring that the cost estimates for the designated technical matters are kept up to date; are robust; are consistent with the state of knowledge and technology at the time of calculation; and that the calculations take prudent account of risk and uncertainty. Further details of what the Secretary of State would expect in this regard are set out in Part 2b of this Guidance.

Transparency

1.15. The FDP must ensure that the arrangements set out under the FAP to accumulate, maintain and manage funds to meet the estimated costs for the designated technical matters are transparent and visible to the Secretary of State and to other persons with obligations under the FDP.

Clarity of terms and responsibilities

1.16. The FDP must have clear terms. The FDP must also set out clearly the roles and responsibilities of the Fund, the operator and any other relevant entities (including the Verifier (as defined in paragraph 2a.23) and any person with obligations under the FDP) for the Secretary of State to form a clear view of their responsibilities and, where relevant, obligations under the FDP.

Durability of arrangements

1.17. The FDP must be durable so that the arrangements set out in the FDP remain applicable for the generating lifetime of the station, throughout decommissioning and until the operator has satisfied all of its obligations under the FDP.

Fund structure

- 1.18. The FDP, by way of the FAP, must set out, as required under section 45(7)(c) of the Act, the details of any security to be provided in connection with meeting the estimated costs for the designated technical matters. The Government would expect to see the security held, managed and administered by an entity which is independent of the operator and the Government (that is, the Fund).
- 1.19. The FDP, by way of the FAP, must set out how the relationship between the operator and the Fund will be structured in order to meet the Objective and comply with the Guiding Factors. Further details of what the Secretary of State would expect in this regard are set out in Part 2c of this Guidance.

Independence of Fund

- 1.20. The Secretary of State will expect the FDP to contain arrangements under which the Fund is managed in a manner that is independent of the operator and of the Government, subject to the ongoing monitoring set out in the Energy Act and in this Guidance. Independence means the absence of the ability to control, directly or indirectly, the structure, governance, maintenance or operation of the Fund once it has been established. Further details of what the Secretary of State would expect in this regard are set out in Part 2c of this Guidance.

Sufficiency of Fund

- 1.21. The FDP, by way of the FAP, must set out mechanisms to ensure that sufficient assets will be available to meet in full the estimated costs of carrying out the plans as set out in the DWMP for those designated technical matters.
- 1.22. The FDP, by way of the FAP, must also set out what remedial action the operator will take to restore the Fund Assets to sufficiency if, at any date, they are insufficient against the Target Value, including a prudent risk-based contingency, as at that date. Further details of what the Secretary of State would expect in this regard are set out in Part 2c of this Guidance.

Restrictions on the use of Fund Assets

- 1.23. The FDP, by way of the FAP, must set out arrangements to ensure that the structure and governance of the Fund is such that the Fund Assets cannot be disbursed for any purpose other than the discharge of the operator's decommissioning, waste management and waste disposal liabilities to which the FDP relates, as and when those liabilities fall due, and irrespective of any reorganisation of the group to which the operator belongs.

- 1.24. The above does not preclude the FDP from making provision for the costs of discharging the Fund's administrative duties relating to the FDP to be met from Fund Assets. The FDP may also make provision for the return of surplus assets to the operator from time to time. Further details of what the Secretary of State would expect in this regard are set out in Part 2c of this Guidance.

Insolvency remoteness

- 1.25. The FDP must put in place arrangements and establish a relationship between the operator and the Fund such that the risk to Fund Assets and any payments due to the Fund under the terms of the FDP is remote in the event of the insolvency of the Fund, the operator or of any body corporate associated with the operator. Further details of what the Secretary of State would expect in this regard are set out in Part 2c of this Guidance.

Other considerations

Fleet Approach

- 1.26. It is possible that an operator may wish to develop a number of sites and that key elements and security provided for in the FAP (as part of the FDP) for each site will be closely related. Where, in such circumstances, the operator can demonstrate that such an arrangement is advantageous to meeting the Objective at the time when the Secretary of State approves the first of what he expects to be a series of FDPs from the operator, then the Secretary of State in making decisions on any subsequent FDPs will have regard to the FDPs already approved. The operator would be expected to set out the self sufficiency of the initial FDP should other sites and related FDPs not subsequently arise.
- 1.27. Subject to the subsequent FDP(s) meeting the Objective at the time the decision on the subsequent FDP is made, the Secretary of State would expect to approve subsequent FDPs on terms consistent with the first approved FDP from that operator, provided that the assumptions on which the first FDP was approved have not changed.

Modification of an FDP

- 1.28. In determining whether (and if so, on what terms) to propose a modification to the FDP, the Secretary of State will have regard to the matters set out in this Guidance; in particular whether the modification is a necessary, appropriate or proportionate means to ensure that the Objective is met and the Guiding Factors are complied with.

1.29. In determining whether (and if so on what terms) to approve a modification put forward by the operator or another person with obligations under the FDP, the Secretary of State would also expect to have regard to the provisions of the FDP and any mechanisms set out in the FDP for its updating. In particular the FDP may contain suggested mechanisms relating to certain types of modification which fall above any threshold set out in the Regulations. For example, where it can be predicted in advance that a modification may be required by the operator as a matter of course and mechanisms are set out in the FDP, the Secretary of State would expect to approve any such modifications compliant with the mechanisms set out in the FDP, provided that the general principles in paragraph 1.28 above are complied with.

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

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

Introduction

2a.1 To assist operators in the development of an FDP under section 54(5) of the Energy Act 2008 the Secretary of State may publish Guidance about the preparation, content, modification and implementation of an FDP. This section of the Guidance is applicable to the Decommissioning and Waste Management Plan (the DWMP), which is covered in more detail in Part 2b of this Guidance, and the Funding Arrangement Plan (the FAP), which is covered in Part 2c of this Guidance.

Publication of the FDP and reports

2a.2 The Secretary of State, mindful of the public interest in such arrangements, would expect the operator to publish as much of the FDP as possible except for material of a sensitive nature. The operator should, therefore, set out in the FDP proposals regarding publication, clearly identifying those issues that are commercially confidential or may have security sensitivities.

2a.3 The Secretary of State also expects annual and quinquennial reports to be published by the operator taking into account, as appropriate, commercial confidentiality and security considerations. The operator should set out in the FDP proposals regarding publication. The Secretary of State expects that other relevant documents will also be made public where possible. It should be noted that the entire FDP and documents related to it will be subject to the Freedom of Information Act 2000 should requests for information be made in relation to them.

Record keeping

2a.4 The operator should demonstrate to the Secretary of State that, as part of its record keeping processes, it will maintain an accurate record of the design of the nuclear island(s) and any other aspect of the site which gives rise to liabilities to be included in the DWMP. Such records should be kept up-to-date, taking into account plant modifications and other relevant technical and operational changes. These processes may be based, where appropriate, on

the record keeping processes undertaken to ensure compliance with site licence and environmental permitting obligations. However, where such processes do not adequately record changes to the waste inventory, or liabilities in respect of decommissioning and waste management, separate processes will be required.

- 2a.5 Such systems will assist the operator in demonstrating that it has in place comprehensive, transparent and effective arrangements for monitoring and capturing operational and technical changes that may trigger changes to the DWMP.

Annual report and quinquennial report

- 2a.6 The operator must compile annual and quinquennial reports which are compliant with the Regulations made under the Act¹². The purpose of the reports is to ensure that the Objective continues to be met and that the Secretary of State is made aware of changes of scope of the FDP over the reporting period.
- 2a.7 It is expected that operators will consult with the Fund, as appropriate, when preparing the reports, particularly where there are any substantive differences of opinion. However, the reports are to be submitted by the operator who will be responsible for their contents. Reports should be addressed to both the Secretary of State and the Fund. The Regulations require as part of the annual and quinquennial reports the provision of a verification report on certain matters. This verification report should also be addressed to the Secretary of State and to the Fund.

Annual report

- 2a.8 The purpose of the annual report is to set out and summarise any changes over the reporting period to the cost estimates in the DWMP for the designated technical matters and any changes to the security provided to meet those costs. In relation to the latter, the Secretary of State would expect to be provided with details of changes to the performance of such security (which includes details of changes to the performance of the Fund) over the course of the reporting period.

¹² The Government has proposed text for the Nuclear Decommissioning and Waste Handling (Finance and Fees) Regulations 2010 (the proposed Regulations) and expects to lay them in the House subject to parliamentary approval in time for them to come into effect on 6 April 2011.

- 2a.9 Where the annual report contains changes to the cost estimates, the operator must include within it a verification report in respect of such changes. The verification report should assess such changes to determine if the estimates of costs are prudent.
- 2a.10 The annual report may also include notification of modifications made to the FDP for which, pursuant to the Regulations, the Secretary of State's approval is not required. Operators, however, need to bear in mind that in accordance with the Act the modification to the FDP in question cannot take effect earlier than when the notification is given.
- 2a.11 In the course of preparing the annual report, the operator is expected to consult the Fund in relation to any changes to the security provided to meet the estimates of costs which are reported on and the adequacy and accuracy of the information provided in the report in this respect.
- 2a.12 An annual report is not required in the year that a quinquennial report is due.

Quinquennial report

- 2a.13 The purpose of the quinquennial report, which is a detailed and comprehensive analysis, is to ensure that the FDP is up to date. For the DWMP this is to ensure that the plans for the decommissioning of the site and for the management and disposal of waste arisings are realistic, clearly defined and achievable and that the corresponding cost estimates are robust (set out in Part 1 of this Guidance). For the FAP, the purpose is to ensure that the arrangements in place continue to make prudent provision and so ensure that the Objective set out in Part 1 of this Guidance continues to be met.
- 2a.14 The operator is also required to provide a report on changes to the FDP over the reporting period. The report must provide details of changes to the operator's plans for the decommissioning of the site and for the management and disposal of waste arisings. The report must also contain changes to the cost estimates for the designated technical matters. The report must also contain details of changes to the security provided to meet the cost estimates and this will include details of the performance of this security to date and any changes in future projections for this security.
- 2a.15 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 and which assesses those changes to determine if the estimates of costs and financial provision are prudent.

- 2a.16 The quinquennial report may also include notification of modifications made to the FDP in relation to which, pursuant to the Regulations, the approval of the Secretary of State is not required. Operators need to bear in mind that, in accordance with section 51 of the Act, the modification to the FDP in question cannot take effect earlier than when the notification is given.
- 2a.17 As with the annual report, when preparing the quinquennial report the operator is expected to consult with the Fund in relation to any changes to the security provided to meet the estimates of costs which are reported on and the adequacy and accuracy of the information provided in the report in this respect. The Fund should in particular provide input in relation to the performance of the security to date and the anticipated ability of the security to meet the estimates of costs over the relevant reporting period(s).
- 2a.18 As a quinquennial report will require detailed analysis an operator may decide that, following an appraisal of the reported changes, its FDP needs to be modified in a manner which requires the approval of the Secretary of State. In this case, an operator may consider it appropriate to propose such a modification alongside its submission of the quinquennial report. This is notwithstanding the fact that there is an ongoing duty to ensure the FDP is up to date.

Information

- 2a.19 The Secretary of State has powers to obtain in certain circumstances information from the operator and other persons with obligations under the FDP under sections 52 and 53 of the Energy Act 2008. The Secretary of State would also expect the Fund to have appropriate rights to request and receive information from the operator; these rights and any associated obligations should be set out in the FDP.

Notification

- 2a.20 The Secretary of State would expect the FDP, by way of the FAP, to provide appropriate procedures to ensure that the operator and/or the Fund report to the Secretary of State immediately on or prior to the occurrence of any of the following events (whether or not they result in a breach of the FDP):
- Initiation or threat of insolvency proceedings against the operator, an associated company with obligations under the FDP or the Fund;
 - Breach of law or breach of contractual arrangements by the operator, an associated company with obligations under the FDP or the Fund which has or is likely to have a material adverse effect on the operator

or the Fund's ability to make or receive contributions to the Fund (as appropriate); or any other matter which would reasonably be considered material to the operator or the Fund's ability to make or receive contributions to the Fund (as appropriate);

- Change of control or ownership of the operator or the Fund (if the ownership structure allows) before the change has taken place (see section on "Change in ownership or control of the operator or site" in this part of the Guidance);
- Change in the credit rating of the operator, the Fund or of any entity providing a guarantee or other credit support under the FDP.

Verification

2a.21 Under the Regulations, the Secretary of State may rely on a verification report commissioned by the operator. A verification report is an assessment of the costs estimates for the designated technical matters and of any security provided to meet such costs. This assessment must be carried out by a person who is independent of the operator and any other person with obligations under the FDP.

2a.22 Under the proposed Regulations a verification report is required when:

- an FDP is submitted to the Secretary of State for approval;
- a proposal is made by the operator or any other person with obligations under the FDP to modify the FDP or to modify the conditions to which the FDP is subject;
- an annual report is provided to the Secretary of State; or
- a quinquennial report is provided to the Secretary of State.

2a.23 The Secretary of State may refuse to rely upon a verification report commissioned by the operator unless he is satisfied that the person who has carried out the verification (the Verifier):

- has the qualifications and experience to carry out the assessment;
- is independent of the operator and any person with obligations under the FDP; and
- has made a relevant assurance in respect of the assessment made in the verification report.

2a.24 A relevant assurance must summarise the verification report and also refer to the standards in accordance with which the verification has been carried out.

2a.25 It is anticipated that these standards will be set out in the terms of engagement of the Verifier by the operator, and that when considering whether:

a) the estimates of costs of the designated technical matters are prudent; and

b) any provision for the financing for these cost estimates is prudent,

the Verifier will consider these issues in the context of the definitions, assumptions and processes contained in the FDP itself. This is because the FDP, at the time of its approval, will have been agreed by the Secretary of State on the basis that it is prudent. In most cases, it is anticipated that verified compliance with an FDP will result in prudent provision and the Verifier will not be expected to reach any other conclusion. However, where the mechanisms established in an FDP result in the estimates of costs not being prudent estimates (for example, the Verifier concludes that costs are significantly underestimated); or that the provision for the financing of these costs is not prudent (for example, the rate of return assumptions for the Fund are significantly over-optimistic) the Secretary of State would expect the Verifier to report accordingly and to make recommendations as to how to rectify the position.

2a.26 The Secretary of State appreciates that a Verifier will wish to limit its liability in respect of the verification report. In this regard the Verifier may wish to set out in the verification report such limitations or alternatively it may prefer to seek the Secretary of State's acknowledgement as to the limit on its liability before providing their report.

Proposals for remedial action

2a.27 The operator has a duty under law to meet all the liabilities in respect of decommissioning, waste management and waste disposal that arise from the operation of a new nuclear power station. In addition to the criminal sanctions provided for in Chapter 1 of Part 3 of the Energy Act and in order to limit the prospect of dispute between the operator and the Fund, the Secretary of State would encourage the operator to set out in its FDP the steps that it will take to make good breaches of the FDP (where they are capable of remedy) and over what timescales, and what steps, if any, the Fund might also take in such circumstances.

- 2a.28 The obligation to contribute to the Fund Assets must be legally binding on the operator and enforceable by the Fund. The FDP should specify the manner in which such an obligation can be enforced by the Fund. Failure to comply with an obligation imposed by an approved FDP is an offence under section 57 of the Energy Act. The FAP must set out the remedial steps to be taken if the Fund becomes, or is at risk of becoming, under-funded at any point, including the additional obligations that would arise on the operator and/or on associated companies, or other persons as specified in the FDP, and the powers of the Fund to take action against such entities (see section on “Insufficiency of the Fund” in Part 2c of this Guidance).
- 2a.29 The FDP should clearly set out how much notice would be required to be given by each party (and in what form), what action is to be taken following a breach and the time frames within which any such action would be required to be taken.
- 2a.30 Notwithstanding the existence of measures outlined above, the Secretary of State will expect the operator to promptly inform him of any breach and the proposed remedial action. If the proposals for remedial action were acceptable to the Secretary of State and were adhered to, the Secretary of State would take this into account when determining what, if any, enforcement action to take in relation to a breach.

Change in ownership or control of the operator or site

- 2a.31 The Energy Act gives the Secretary of State powers to impose obligations under the FDP on associated companies of the operator, for example, the parent company or sister companies, in order to ensure that prudent provision is made for the financing of the designated technical matters.
- 2a.32 Assuming a change of ownership of the site leads to a change in the identity of the site licensee, section 45 of the Energy Act ensures that an FDP must be submitted by the new operator (and approved by the Secretary of State) prior to its starting to operate the station.
- 2a.33 The FDP should set out the consequences of a change in control of the operator or site, including a change in the group structure of the operator whereby an associated company of the operator will cease to be an associated company as defined under the Energy Act, and detail the steps to be taken to inform the Secretary of State of such change of control. This must give the Secretary of State the opportunity to approve, approve subject to modifications or conditions or reject any related modifications to the FDP in good time prior to such a change of control occurring. The FDP may, however, specify circumstances where the change of control of an associated

company (which does not have obligations under the FDP) need not be notified to the Secretary of State. This may be the case, for example, where the associated company is dormant, has de minimis assets or where such company is not relevant for the purpose of securing prudent provision for the financing of the designated technical matters.

2a.34 Where the change of control means that a company with obligations under the FDP will cease to be an associated company of the operator (whether it is a parent or sister company) then the FDP should require the operator to submit for approval the required modifications to its FDP to reflect the proposed change in obligations.

2a.35 Where the change of control means that a company which is an associated company of the operator and which has no obligations under the FDP, ceases to be an associated company, the Secretary of State would not normally expect the operator to propose a modification to the FDP unless, given the circumstances of the change of control, a modification would be appropriate.

2a.36 Before approving any modifications to the FDP in relation to a change of control the Secretary of State will expect to be satisfied that the proposed revised funding arrangements will comply with the Objective, and will take into account the views of the Fund. The Secretary of State would not expect to release any party from its obligations under the FDP if such release would endanger the ability of the funding arrangements to, and/or may adversely affect the ability of the Fund to, meet the Objective.

2a.37 In approving the FDP and determining whether to modify the FDP and impose new obligations on certain parties (or not to release parties from obligations to which they are already subject) the Secretary of State will have regard to such matters as:

- the views of the Fund on the proposed funding arrangements;
- the financial strength of the proposed new owner, or investors, or (where relevant) the group structure of the operator as a whole following the change of control, and the support that the proposed new owner or investors will provide to the operator to ensure that the Fund accumulates sufficient funds to meet the operator's liabilities under the FDP;
- the current level of funding as compared with current estimates of the operator's liabilities and plans for future funding levels; and

- evidence of failure by any of the parties to adhere to their obligations under the FDP.

2a.38 Further information about the exercise of the power to modify in cases where a change of control or other relevant change occurs is set out in the section on “Modification of an FDP” in this Part of the Guidance.

2a.39 If the structure of the Fund allows for a change of control of the Fund, the FDP should set out the consequences of a change in control of the Fund and detail the steps to be taken to inform the Secretary of State of such change of control before it takes place and any other steps to be taken to mitigate the effect of that change.

Modification of an FDP

2a.40 All modifications to an approved FDP (other than as set out in the Regulations) require prior approval by the Secretary of State. If, at any time, an event occurs which requires a change to be made to the FDP, subject to any materiality threshold to be set out in Regulations, the Secretary of State will expect the operator and/or the Fund to promptly inform him of that event, provide details of the effect on the operator’s liabilities of such an event and the financial consequences of such a change on the FDP, and propose for approval by the Secretary of State a modification to the FDP to take account of that event in accordance with the procedure laid down in sections 48 and 49 of the Energy Act.

2a.41 The Regulations published on 18 November 2010 set a materiality threshold of 5% of the estimates of the costs likely to be incurred in connection with either:

- a) the disposal of ILW and spent fuel; or
- b) all other designated technical matters.

2a.42 The Secretary of State and, with the consent of the operator, any other person with obligations under the FDP, may also propose modifications to the FDP.

2a.43 Modifications may include changes to the DWMP, for example to account for technical or operational changes to the nuclear power station which have had an effect on the cost estimates for the designated technical matters. Modifications may also include changes to the FAP, for example to reflect changes to contribution schedules in respect of the Fund to take account of changes to cost estimates set out in the DWMP or to reflect investment returns.

2a.44 The Secretary of State can envisage requiring modifications in the situations set out in paragraphs 2a.45 to 2a.51 below, although this does not constitute an exhaustive list.

2a.45 Where the operator or another person with obligations under the FDP is in breach of obligations under the FDP.

- The Secretary of State may propose a modification but would not normally expect to modify an FDP in every case. In many cases it may be sufficient to ensure that the person brings itself back into compliance with the FDP and remedies the consequences of the breach where that breach is remediable. The Energy Act gives the Secretary of State varied powers (such as the power to impose a direction under section 58) to ensure this outcome.
- It may be appropriate to introduce conditions to the approval of the FDP. Breach of that condition may result in an offence under section 57 of the Energy Act if the station continues to operate.

2a.46 Where a change of control of the operator, or a change of a body corporate which is associated with the operator, is proposed.

- Guidance about what is expected from operators if there is a change of control of the operator is set out in the sections on “Change in ownership or control of the operator or site” in this Part of the Guidance.
- The Secretary of State’s primary concern in such an eventuality would be to ensure that the Objective continues to be met, irrespective of the change of control. In the case of a change of control, the Secretary of State may propose modifications to:
 - adjust the liability of the outgoing associated company under any guarantee or other support provided in relation to the operator’s liabilities to take account (where relevant) of the financial circumstances of the incoming associated company;
 - release the outgoing associated company from its obligations;
 - impose obligations on the outgoing associated company where previously it had none;
 - adjust existing obligations or impose new obligations on existing associated companies (for example, in the case of a joint venture)

to take account of the new group structure including (where relevant) the position of the incoming associated company;

- impose new obligations on incoming owners or investors;
 - adjust obligations on the operator accordingly.
- In the event of a change of control of a company with obligations under the FDP which is not an associated company, the Secretary of State would expect the FDP arrangements to take account of any potential change of control and would only expect to propose modifications in limited circumstances when the change of control meant that the financial arrangements in place were no longer sufficient to satisfy the Objective.

2a.47 Where a technical or operational change increases the estimates of the operator's liabilities by more than the materiality threshold.

- The Secretary of State would expect the operator to seek his approval to any modifications to the FDP (subject to, where relevant, any mechanisms set out in the FDP as per paragraph 1.29 of this Guidance). Where the operator fails to do so, the Secretary of State might propose the necessary modifications.

2a.48 Where the operator seeks to extend the life of the station beyond the period set out in the FDP.

- A proposal to extend the life of the station would necessitate modifications to the FDP for which the Secretary of State would expect the operator to seek his approval. Where the operator failed to do so, the Secretary of State might propose the necessary modifications.

2a.49 Where the Fund Assets are underperforming for a period of time.

- The Secretary of State would expect to require a modification to the Investment Strategy where the Fund Assets have been underperforming for a period of time likely to result in the Target Value not being achieved.

2a.50 Where the operator wishes to follow a "fleet approach".

- The Secretary of State would expect the operator to seek his approval where there is a proposal to amend an existing FDP to reflect a proposal for a subsequent FDP as a result of the development of further sites that would necessitate modifications to the existing FDP.

Where the operator failed to do so, the Secretary of State might propose the necessary modifications.

2a.51 It is possible to envisage other circumstances which give rise to reasonable doubts about the ability of the operator or an associated company to discharge its obligations under the FDP. In such a case, the Secretary of State may consider whether to propose a modification. For example,

- the credit rating of the operator or of an associated company with obligations under the FDP or any entity providing a guarantee or credit support under the FDP may be downgraded and no appropriate alternative security be capable of being put in place or being put in place sufficiently promptly;
- there may be a significant and more than short lived reduction in the net asset value of the operator or of an associated company with obligations under the FDP; or
- insolvency proceedings may be taken in respect of, or threatened against, the operator or an associated company with obligations under the FDP.

2a.52 In all cases, the Secretary of State may only approve a modification (whether proposed by him or by another person) if he does so with the aim of meeting the Objective in ensuring that prudent provision is made for the activities regulated by section 49(7) of the Energy Act.

Prohibition on use of a site without an approved FDP

2a.53 Under section 45 of the Energy Act 2008 a person who applies for a nuclear site licence to install or operate a nuclear power station must notify the Secretary of State of the application and prepare and submit an FDP for approval. Further, where an operator changes the new operator must also submit an FDP.

2a.54 A nuclear site licence is required, under the Nuclear Installations Act 1965 (NIA), to use a site for the purposes of installing or operating any nuclear reactor not comprised in a means of transport. Accordingly, a nuclear site licence is required to install such a reactor for the purpose of producing atomic energy. It is an offence to install the reactor without the necessary licence being in place.

2a.55 Under section 47 of the Energy Act 2008 it is an offence for a person to use, or permit another person to use, a site by virtue of the nuclear site licence when there is no approved FDP in place. The purpose of section 47 of the

Act is to ensure that at the point when activities for which a licence is legally required are undertaken an approved FDP is in place. So, the prohibition in section 47 of the Act covers any use of the site for a purpose for which a nuclear site licence is legally required.

2a.56 The Health & Safety Executive (HSE), responsible for issuing nuclear site licences, has provided Guidance¹³ in relation to the application of the NIA and the latest point by which a nuclear site licence must be granted for the installation of a new nuclear installation. In this respect current HSE Guidance is:

'...that a nuclear site licence must be granted to a developer by HSE before they may undertake construction work which could, if inadequately conceived or executed, affect nuclear safety when the plant is operating. Based on this, HSE defines the point beyond which a licence is required as the placement of the first structural concrete for buildings with nuclear safety significance. Consequently, it may be permissible for a developer to undertake excavation of building foundations and placement of the blinding layer before a nuclear site licence is granted.'

2a.57 Accordingly, under the NIA a licence is required to be in place by the point that the first structural concrete for buildings with nuclear safety significance is poured.

2a.58 Where a site licence has been issued, but there is no approved FDP in place, an operator will commit an offence under section 47 of the Energy Act 2008 only if they begin construction work on buildings with nuclear safety significance. This is because this is a use of the site which is considered to be by virtue of the licence.

2a.59 Use of a site, even after the issue of a licence, for a purpose for which a nuclear site licence is not required will not amount to an offence under section 47 of the Act. This is because such 'use of the site' would not, for the purposes of that section, be 'by virtue of' the licence.

2a.60 It is worth noting that a nuclear site licence may be granted by HSE prior to the point at which it is considered essential to have a nuclear site licence. HSE may also attach various conditions to such licences which are intended to control activities which could impact on nuclear safety. These conditions could apply to activities carried out on or off the licensed site. This does not

¹³ <http://www.hse.gov.uk/newreactors/license.htm>

affect the Secretary of State's view that it is only use of the site for which it is considered essential to have a nuclear site licence and which will amount to "use of the site by virtue of the licence" for the purposes of section 47 of the Act.

Part 2b: Decommissioning and Waste Management Plan Guidance

Introduction to the DWMP Guidance

- 2b.1 This section contains revised draft Guidance for operators and potential operators of new nuclear power stations to assist them in drawing up a DWMP which should set out and cost the steps involved in decommissioning a new nuclear power station and managing and disposing of hazardous waste¹⁴ in a way which the Secretary of State may approve.
- 2b.2 Together with separate FAP Guidance, this Guidance provides information on what an FDP should contain.
- 2b.3 The aim of the DWMP is to demonstrate that the decommissioning of the nuclear power station and management and disposal of waste can be undertaken in a way which is prudent and consistent with the requirements and expectations of the safety, security and environmental regulators. By forming part of the FDP required to be approved by the Secretary of State, it is designed to ensure that a plan for these activities, based on established techniques and steps, is prepared prior to the construction of the nuclear power station. It is also designed to ensure that accurate and up to date estimates of the costs of decommissioning and waste management and disposal are provided, to demonstrate that prudent provision will be made to meet these costs.
- 2b.4 Under the Energy Act, as one of a number of approvals to build a new nuclear power station, operators will be required to submit an FDP to the Secretary of State for approval. The Energy Act requires such operators to provide to the Secretary of State details of their plans for managing and disposing of all wastes.
- 2b.5 The DWMP is that part of the FDP that addresses those matters referred to in section 45(7)(a) and (b) of the Energy Act, namely details of the steps to be taken in relation to what are called the “technical matters” and estimates of the costs likely to be incurred in taking steps in relation to what are called the “designated technical matters”.

¹⁴ The Government’s policy is that new nuclear power stations should proceed on the basis that spent fuel will not be reprocessed. Thus the Base Case assumes that there will be no re-processing of spent fuel and that spent fuel will be disposed of after it has been used. Therefore spent fuel is regarded as waste for the purposes of this Guidance.

- 2b.6 The technical matters are the steps set out in the DWMP relating to the decommissioning of the power station, cleaning up of the site, and waste management and disposal activities. The requirement that these be set out is intended to meet the overall objective of the FDP that operators make prudent provision for the full costs of decommissioning their installations; and their full share of safely and securely managing and disposing their waste, and that in doing so the risk of recourse to public funds is remote at all times.
- 2b.7 Some of the technical matters are designated technical matters. These are defined in the Energy Act as being the steps that need to be taken to decommission the installation and clean up the site (which includes the management and disposal of waste) after the nuclear power station has finally ceased generation. The Act also envisages that certain steps undertaken during the generating life of the station may also be specified as designated technical matters by Order.
- 2b.8 The Government proposes that the following activities will be designated technical matters by Order¹⁵ under the Energy Act:
- construction and maintenance¹⁶ of interim stores for ILW and spent fuel that are not initially constructed as part of the installation;
 - any activity preparatory to the decommissioning of a relevant nuclear installation and the cleaning up of the site.
- 2b.9 The key difference between the technical matters and the designated technical matters is that the cost of non-designated technical matters are to be met by the operator from operational expenditure, while the costs of designated technical matters must be provided for in the independent Fund which operators will be expected to set up. Table 3 sets out a summary of principal cost streams and whether the cost will be met from operational expenditure or the independent Fund.
- 2b.10 The costs of non-designated technical matters will not be subject to the terms of the FAP approved by the Secretary of State under the Energy Act. However, operators must detail in their DWMP the steps to be taken in relation to the technical matters to demonstrate that they have realistic, clearly defined and achievable plans. Payments for costs of non-designated technical

¹⁵ http://www.opsi.gov.uk/si/si2010/draft/pdf/ukdsi_9780111502877_en.pdf

¹⁶ Maintenance costs are taken to mean those costs that are required to be incurred so that the integrity of the store remains such that it is able to safely and securely store the waste and spent fuel for the required period of time. It is not considered to include ongoing operational expenditure relating to the stores such as, for example, security and utilities.

matters will need to be made at the time these expenses are incurred, that is during the generating life of the station, when the operator should have access to sufficient monies to meet such costs without reference to the Fund. It is also anticipated that such costs are likely to be incurred at regular intervals so it is appropriate that these costs should be met from operational expenditure to avoid the unnecessary cost and burdens that would arise, were monies to be paid into the Fund only to be withdrawn in a relatively short period of time later (e.g. within the same financial year).

Structure of the DWMP

2b.11 This Guidance will assist operators in understanding their obligations under the Energy Act, and what is required for an approvable DWMP. The Guidance is not intended to be unduly prescriptive but instead sets out the principles which the Secretary of State would expect to be satisfied in the operator's DWMP.

2b.12 The Secretary of State would expect the DWMP to be divided into three principal phases, as outlined later in this part of the Guidance. In addition, there are a number of elements that an approvable DWMP would also be likely to include, namely:

- A clear timeline showing key milestones and giving scheduling assumptions in each of the three phases of the Base Case as defined below.
- A summary of the key assumptions underpinning the operator's DWMP. In particular the operator should provide details of any assumptions that differ from the Base Case, with an explanation of reasons for any proposed deviation from the Base Case.
- A summary of the operator's cost estimates, in a format consistent with Table 3 in this section of the Guidance.
- An explanation of the derivation of the cost estimates including the operator's analysis of the level and sources of risk and uncertainty in those estimates.
- An explanation as to how the assumptions and parameters underpinning the DWMP are expected to evolve over time as the new nuclear power station operates and draws near to closure.

Level of detail in the DWMP

- 2b.13 Operators should provide sufficient detail in their DWMPs on both the technical matters and designated technical matters to enable the Secretary of State to have confidence that they have realistic, clearly defined and achievable plans. The amount of information that operators provide on specific activities should be such that the Secretary of State is able to be satisfied that the operator's cost estimates are prudent. The level of detail should be commensurate with the impact that the activity will have on the level of liabilities. However, the Government would expect to see a greater level of detail on the designated technical matters in order to have sufficient information to substantiate the operator's cost estimates for these.
- 2b.14 For example the Secretary of State would want to understand an operator's intended operating strategy, including the level and range of fuel "burn-up" that is anticipated, insofar as it may impact on, for instance, the predicted spent fuel inventory for the site and its relevant characteristics. This information will substantiate the operator's assessment of the volume and characteristics of the spent fuel to be produced, and will thus have a direct bearing on the costs of waste management and disposal. This information is necessary for the Secretary of State to have confidence that the operator is making adequate financial provision to meet liabilities.
- 2b.15 On the other hand, 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 establishing whether sufficient underpinning detail exists to substantiate cost estimates the Secretary of State would expect to rely on the independent verification of the operator's DWMP¹⁷, which will be required to address this question specifically.

¹⁷ For more information on third party verification see "The Energy Act 2008: Consultation on the Financing of Nuclear Decommissioning and Waste Handling Regulations"
http://www.decc.gov.uk/en/content/cms/consultations/nuc_waste_cost/nuc_waste_cost.aspx

The Base Case

Introduction to the Base Case

2b.16 This section sets out a number of assumptions regarding the means by which waste may be managed and disposed of and decommissioning carried out by a new nuclear power station operator. These define a generic lifecycle plan for new nuclear power stations known as the “Base Case”.

2b.17 The Base Case serves two principal functions:

- It sets out the key points which the Secretary of State would expect to be addressed in a DWMP that is submitted for approval.
- It acts as a vehicle to enable the Secretary of State to estimate the range of costs associated with decommissioning and hazardous waste management and disposal¹⁸. This will ensure that the Secretary of State, the NLFAB and the Fund have a benchmark against which to assess the estimates produced by the operator.

2b.18 It is recognised that DWMPs for individual power stations will differ in detail from the Base Case as they will be based on a specific station design at a specified site run by a particular operator. If, however, a DWMP broadly conforms to the assumptions underlying the Base Case, the Secretary of State would expect to approve it (or approve it with relatively minor modifications). Section 46(4) of the Energy Act requires the Secretary of State to exercise his powers to approve an FDP with or without modifications or conditions in relation to the approval, or to reject it, with the aim of ensuring that it makes prudent provision for the technical matters, including estimates of the costs of designated technical matters.

2b.19 An operator’s DWMP should achieve the overall outcome of ensuring that prudent provision is made for carrying out and estimating the costs of waste management, disposal and decommissioning. Operators will be expected to have regard to the Base Case when developing the DWMP they will submit to the Secretary of State. However, there will be flexibility to allow operators to propose and justify other ways of carrying out decommissioning, waste management and waste disposal if they choose to do so. If an operator puts

¹⁸ The formulation of the cost estimates does not detract from the duty which the Secretary of State expects the Fund should be under to verify cost estimates (as appropriate) put forward by the operator both at the time of first approval of the FDP and pursuant to periodic reviews as set out in the FAP guidance.

forward a DWMP that is not consistent with the Base Case, the onus will be on the operator to justify its proposal and the Secretary of State will consider DWMPs based on alternatives to the Base Case on a case-by-case basis.

Relationship between the Base Case and regulatory requirements

- 2b.20 The Base Case is built on existing policy and regulatory requirements; although it also makes additional assumptions to ensure it represents a realistic and prudent means of estimating the costs of the designated technical matters. Each operator's FDP must ensure that it sets out plans for the management and disposal of all hazardous waste streams and that it includes all the elements for which operators will need to make financial provision.
- 2b.21 The emphasis on ensuring that sufficient financial provision is made to cover the liabilities means that the Base Case may differ in some aspects from the assumptions and requirements of the safety, security and environmental regulators. This is because the Secretary of State and the regulators follow different regimes. However, the distinct purpose of this Guidance is to ensure that operators make prudent financial provision to meet the costs of the designated technical matters.
- 2b.22 Before a decision on approval is made, the Secretary of State will consult the regulators in relation to the plans submitted by operators to ensure that they are consistent with regulatory expectations. Likewise, where a modification to the DWMP is proposed, the Secretary of State will also consult the regulators. We have worked with the regulators to finalise the Base Case.

The Phases of the Base Case to be set out in the DWMP

- 2b.23 The Secretary of State would expect the DWMP setting out the technical matters and the costs of the designated technical matters to be divided into three principal phases.
- Phase 1: Pre-generation – covers those activities relevant to decommissioning and clean up which must be undertaken before construction of a nuclear power station can begin and the period during which operators will be required to obtain all the regulatory permissions required to begin generation.
 - Phase 2: During the generating life of the power station – operation of the station, including any modifications or refurbishment required during the generating life and the management of operational wastes.

- Phase 3: After the end of generation – dismantling the station, management and disposal of remaining waste and clean-up of the site to a condition agreed with the regulators.

2b.24 To the extent practicable, operators will be expected to follow this outline of phases in preparing their DWMPs.

Phase 1 – Pre-generation

2b.25 This phase of the Base Case covers those activities which must be undertaken before a nuclear power station can begin to generate electricity. The operator will be expected to demonstrate that their DWMP is consistent with the submissions to the planning authorities (including the Infrastructure Planning Commission or its successor bodies) with regard to the application for planning permission or development consent and to the regulators, with regard to the health, safety, security and environmental permits needed to begin generation.

2b.26 An approvable FDP will require the operator to demonstrate that a credible disposal route for the ILW and spent fuel has been identified. The Base Case assumes that this will be in a Geological Disposal Facility (GDF) that the Government will construct to dispose of higher activity radioactive wastes. The terms on which the Government will agree to take title to and liability for an operator's ILW and spent fuel is expected to be set out in a contract to be agreed between the operator and the Government alongside the operator's FDP.

Phase 2 – During the generating life of the power station

2b.27 The power station lifetime set out by the operator in their DWMP applies to the maximum period in which funding will need to accrue over the operating life of the station to cover the predicted liabilities. The Base Case assumes that the Fund accrues from a single station operating for 40 years. However we recognise that most current station designs, including those undergoing the UK Generic Design Assessment, anticipate an operational life of at least 60 years and it will be open to operators to justify alternative station lifetimes. If the proposed design has been through the UK Generic Design Assessment process, the Government would expect the proposed station lifetime to be in line with that which has been stated by the Requesting Parties in their submissions. Whatever station life is proposed, in accordance with the relevant part of the FAP Guidance the operator must ensure that its FDP is robust against the risk that the site has to be decommissioned earlier than expected.

2b.28 The operator is responsible for ensuring that all the facilities required for any necessary handling, conditioning and storage of operational wastes are available as and when needed. The construction and maintenance costs of interim stores to ILW and spent fuel that are not initially constructed as part of the installation are a designated technical matter. Therefore these activities should be identified and described in the DWMP and provision for these activities set out in the FAP.

2b.29 In the final years of the generating life of the power station, the operator will be expected to prepare for the decommissioning of the power station through undertaking detailed pre-decommissioning planning (the main activity undertaken in preparation for decommissioning). Activities preparatory to decommissioning are a designated technical matter for which the cost will need to be met by the Fund. Therefore these activities should also be identified in the DWMP and provision for these activities set out in the FAP.

Phase 3 – After the end of generation

2b.30 The Base Case assumes that decommissioning begins when the station is shut down and ceases generating “nuclear” electricity. Decommissioning ends when all station buildings and facilities have been removed and the site has been remediated in accordance with relevant legal and licensing requirements. The Base Case assumption is that the site is restored to a state similar to “Greenfield” or similar to its state prior to construction.

2b.31 The principal stages of the decommissioning process assumed in the Base Case are described in Table 1.

Table 1: Outline of principal stage of decommissioning

De-fuelling	De-fuelling reactor for the last time and transferring the resulting spent fuel to the fuel pond
Stage 1	Conditioning and packaging of potentially mobile wastes (e.g. spent resins) Transfer of conditioned wastes to interim storage to await final disposal
Stage 2	Demolition of non-essential non-radioactive facilities (e.g. administrative buildings that will not be needed to manage the decommissioning process)

	Transfer of spent fuel remaining in cooling pond to interim store
Stage 3	Dismantling of reactor and any other structures remaining on site and management and disposal of resulting waste Disposal of ILW and spent fuel from interim stores Remediation of site De-licensing

2b.32 The Base Case assumes that the spent fuel from a new nuclear power station is kept in interim storage on the site of the power station until the point at which it is disposed of in a GDF, and that the encapsulation of spent fuel is also carried out on-site. In the absence of proposals for centralised facilities these are considered to be prudent assumptions. However in the event that regional or central facilities were available for either storage or encapsulation of spent fuel that should lead to significant reductions in waste management costs.

“Early Transfer” of title to and liability for an operator’s ILW and spent fuel

2b.33 The Government expects to take title to and liability for an operator’s spent fuel and ILW on a specified Transfer Date, or schedule of Transfer Dates, aligned with the operator’s decommissioning timetable. It is currently expected that the Transfer Date(s) will precede the Assumed Disposal Date (the date on which the Government expects to be able to dispose of the ILW and spent fuel in a GDF).

2b.34 This “Early Transfer” does not affect the obligations placed on the operator by the Energy Act 2008. 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. After the Transfer Date the Government will be responsible for ensuring the future management of the waste. 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.35 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. It is anticipated that the final level of this Lump Sum Payment would be set out in the last quinquennial review of the operator's FDP before the Transfer Date.
- 2b.36 At present there is uncertainty over these waste management costs but 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 the 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.37 In the event that the operator expects its waste to transfer to Government before the Assumed Disposal Date, the operator's DWMP should clearly set out those steps expected to take place after the Transfer Date and the cost of those steps. The operator's plan should also contain an estimate of the Lump Sum Payment, including an allowance for a commensurate risk premium, to ensure that the Payment is sufficient to cover all waste management costs incurred between the Transfer Date and the Assumed Disposal Date.
- 2b.38 If geological disposal facilities are not available at the Assumed Disposal Date then the intention of Government would be to meet costs for maintaining the interim stores after the Assumed Disposal Date from the risk premium included in the Waste Transfer Price.
- 2b.39 The terms on which the Government will agree to take title to and liability for an operator's ILW and spent fuel will be set out in a contract that is expected to be agreed between the operator and the Government alongside the operator's FDP.

Updated cost estimates

- 2b.40 The Base Case is a key input into the Government's work to assist operators in drawing up a DWMP. Alongside this, the Government has completed an exercise to develop updated estimates of the costs of decommissioning, waste management and waste disposal and these updated estimates were

published in chapter 5 of the March 2010 consultation document¹⁹. An operator of a new nuclear power station will be expected to calculate their own estimates of these costs, which will differ from those produced by the Government, as they will be specific to the station design, site and other operational decisions of the operator, rather than being generic. However, the Government's cost estimates ensure that the Government and the NLFAB have a benchmark against which to assess the estimates produced by operators.

The Base Case – Working Assumptions List

2b.41 The complete set of assumptions underlying the Base Case is set out below in Table 2. However, the Base Case does not prescribe the contents of a DWMP, so there will be flexibility for operators to suggest and make the case to the Secretary of State for alternative approaches 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 and the Secretary of State will consider DWMPs based on alternatives to the Base Case on a case-by-case basis.

Table 2: Assumptions underlying the Base Case

Issue	Assumptions
Regulatory regime	The regulatory regime to be applied to waste management and decommissioning is that in force at the time the FDP is submitted.
	Definitions of waste categories will remain unchanged from those in current use.
	Dose limits for workers and the public will remain unchanged from those in current use in the UK (set out in the Ionising Radiation Regulations 1999 ²⁰).

¹⁹ Consultation on a Methodology to Determine a Fixed Unit Price for Waste Disposal and Updated Cost Estimates for Nuclear Decommissioning, Waste Management and Waste Disposal, March 2010, http://www.decc.gov.uk/en/content/cms/consultations/nuc_waste_cost/nuc_waste_cost.aspx

²⁰ These regulations can be found at:

<p>Definition of decommissioning and decommissioning costs</p>	<p>For the purpose of the DWMP, decommissioning is defined to begin at the point that the station is shut down with no intention of further use for the purpose of generating electricity.</p> <p>For the purposes of the DWMP, decommissioning is defined to end when all station buildings and facilities have been removed and the site has been returned to an end state which has been agreed with the regulators and the planning authority.</p>
	<p>Costs for decommissioning should be structured to ensure that the costs of management and infrastructure for the station under decommissioning are fully accounted for and separate from costs for other areas of the operator's business.</p>
	<p>Demolition and disposal of waste management facilities are regarded as part of the decommissioning activity.</p>
	<p>Activities preparatory to decommissioning, such as pre-decommissioning planning, are a designated technical matter and the cost will need to be met from the Fund.</p>
	<p>All other costs associated with operating the site after the end of its generating life and until the site licence is surrendered are regarded as part of the decommissioning activity. These costs include, but are not necessarily limited to, those</p>

	associated with maintaining the infrastructure necessary for the operator to be a holder of a nuclear site licence.
Decommissioning facilities	The Base Case assumes that the operator's DWMP will ensure that all facilities on site are decommissioned in accordance with a structured plan, which is acceptable to the regulators and which should reduce the hazard presented by the site in a systematic manner.
	The Base Case assumes prompt decommissioning of the power station, with operators obliged to provide safe and secure interim storage facilities. The storage facilities must ensure that the waste stored will be able to meet the GDF operator's conditions for acceptance at the date scheduled for its disposal.
Care and maintenance	The Base Case assumes prompt decommissioning of the power station with no care and maintenance period after the station has been shut down and before decommissioning takes place. It is open to operators to propose a care and maintenance period in their DWMP submissions, but the inclusion must be agreeable to the regulators and approved by the Secretary of State as part of the operator's FDP ²¹ .

²¹ A care and maintenance period allows the benefits associated with radioactive decay (lower volumes of ILW and reduced dose rates to decommissioning operators) to be realised. Prompt decommissioning, however, means that the site can be fully remediated on a shorter timescale. The balance between these issues may be considered by operators with reference to operational as well as design specific considerations.

Site end state	<p>The Base Case assumes that the final site end state will be such that all station buildings and facilities have been removed and the site returned to a state agreed with the regulators and the planning authority. The Base Case assumption is that the site is restored to a state similar to “Greenfield” or similar to its state prior to construction.</p> <p>As with all Base Case assumptions the operator can propose an alternative in the DWMP, which the Secretary of State will consider. In practice, the state to which the site is returned at the end of decommissioning will be influenced by its previous, and likely future, use. The intention of this Base Case assumption is not to prescribe the site end state but rather to provide a prudent assumption, for cost estimation purposes, of the end state that will have to be achieved at the conclusion of decommissioning in order to return the site to a state which would be agreeable to the regulators and the planning authority.</p>
Cost calculation	<p>It is assumed that for an FDP submitted for approval the cost estimates will be calculated on a money of year basis (escalation and/or discounting terms will be applied post the initial cost assessment).</p>
Effect of station design on the Base Case	<p>The Base Case for different station designs will be the same except where variations are necessary and justifiable.</p>
Station operating lifetime	<p>The Base Case assumes a single station operating for 40 years. However we recognise that all current station designs undergoing Generic Design Assessment have been designed for an operational life of 60 years and it will be open to operators to propose and justify</p>

	<p>alternative station lifetimes. Whatever station operating lifetime is proposed, the operator must ensure that its FAP is robust against the risk that the station has to be decommissioned earlier than expected.</p>
Decommissioning techniques	<p>The Base Case assumes that decommissioning will be undertaken using equipment and techniques available at the time the FDP is submitted. While it is recognised that technical advances may well have a significant impact on the way in which new nuclear power stations are eventually decommissioned, operators must be able to demonstrate that they have a workable plan for decommissioning and waste management using current technology before construction of their station begins.</p> <p>Furthermore, it is impossible to anticipate the impact of technological advance on overall cost, hence the Government's view is that this Base Case assumption is prudent and appropriate.</p>
Management and disposal of ILW	<p>The Base Case assumes that ILW arising from operations and decommissioning will be stored in safe and secure interim storage facilities on the site of the power station, pending disposal in the same geological disposal facilities to be used for the disposal of ILW from existing nuclear facilities.</p> <p>As part of the technical steps in the DWMP the Secretary of State would expect the operator to set out provision for safe and secure interim storage facilities that are technically capable of being maintained or replaced to last until the ILW contained within them can be disposed of.</p>

	<p>The construction and maintenance of interim stores for ILW that are not initially constructed as part of the station are a designated technical matter and the cost will need to be met from the Fund.</p>
	<p>The Base Case assumes that ILW from operations and decommissioning will be disposed of in a GDF.</p> <p>The operator is responsible for transport of the waste to the GDF, although the transfer may be undertaken by a third party, acceptable to the UK regulators, under contract to the operator.</p>
	<p>Alongside the approval of an operator's FDP, the Government will expect to enter into a contract with the operator regarding the terms on which the Government will take title to and liability for the operator's ILW.</p>
	<p>The arrangements for conditioning and storage of ILW must be consistent with those currently acceptable to the UK regulators and must ensure that the waste will meet the GDF operator's conditions for acceptance at the date scheduled for its disposal.</p> <p>Conditioning costs for operational ILW are regarded as operational costs and will not be paid for from the Fund.</p> <p>Conditioning costs for decommissioning ILW will be met from the Fund.</p>
<p>Management and disposal of spent fuel</p>	<p>The Base Case assumes that new nuclear power stations will use uranium or uranium oxide fuel. It also assumes that there will be no reprocessing of the uranium fuel, and spent fuel will ultimately be disposed of.</p>

Spent fuel will be stored in cooling ponds for a period of time, followed by storage in safe and secure interim stores on the site of the power station until decommissioning has been completed and disposal facilities are available to accommodate it. It is recognised that fuel from the latter stages of the power station's life may have to remain in interim stores on site for some years after the station has ceased generation, because of the need to allow it to cool, before it can be transported and disposed of in a GDF.

The Secretary of State would expect the FDP to contain an obligation on the operator to cost interim storage facilities and to set aside funds for such facilities to be technically capable of being maintained or replaced until the spent fuel contained within them can be disposed of.

The construction and maintenance of interim stores for spent fuel that are not initially constructed as part of the station are a designated technical matter and the cost will need to be met from the Fund.

The Base Case assumes that spent fuel will be disposed of in a GDF.

The operator is responsible for transport of the spent fuel to the GDF, although the transfer may be undertaken by a third party, acceptable to the UK regulators, under contract to the operator.

Alongside the approval of an operator's FDP, the Government will expect to enter into a contract with the operator regarding the terms on which the Government will take title to and liability for the operator's spent fuel.

	<p>The Base Case assumes that spent fuel will be encapsulated immediately prior to transfer to a GDF. In the absence of proposals for centralised packaging facilities, it is assumed that encapsulation of spent fuel is carried out on the originating site.</p>
<p>Management and disposal of low level waste (LLW)</p>	<p>The Base Case assumes that LLW arising during operation and decommissioning will be packaged on site by the operator and dispatched to a disposal facility promptly after they have been generated. For the purposes of the Base Case, we assume that disposal will be at the LLW Repository operating in West Cumbria or a successor facility. Dependent on any nuclear new build programme (and any other nuclear sector developments), a successor disposal facility to the LLW Repository is likely to be required, predominantly for decommissioning wastes²².</p> <p>It is assumed that LLW will be disposed of in the UK, and that disposal facilities will be available when required, at a price to be agreed between the power station operator and the operator of the disposal service. Operators will be required to meet the costs of managing and disposing of operational LLW. These costs will be met from operational revenues.</p> <p>The costs of disposing of decommissioning LLW will be met from the Fund.</p>

²² In August 2010 the Nuclear Decommissioning Authority published the UK Strategy for the Management of Solid Low Level Radioactive Waste from the Nuclear Industry <http://www.nda.gov.uk/documents/upload/UK-Strategy-for-the-Management-of-Solid-Low-Level-Radioactive-Waste-from-the-Nuclear-Industry-August-2010.pdf>

	<p>The Base Case assumes that operators will be required to ensure that any facilities needed for packaging are available on site, although it is assumed that LLW will not be conditioned on site and that conditioning facilities will therefore not be needed.</p>
	<p>The assumed arrangements for packaging must be consistent with those currently acceptable to the relevant UK regulators. The operator is responsible for transport of the waste to the disposal facility, although the transfer may be undertaken by a third party, acceptable to the UK regulators, under contract to the operator.</p>
	<p>The Base Case assumes that title to the waste will pass to the disposal facility operator when an individual package has been transported to the facility and accepted by the facility operator as meeting the relevant criteria.</p>
<p>Management and disposal of non-radioactive hazardous Wastes</p>	<p>The Base Case assumes that non-radioactive hazardous wastes arising as a result of operations and decommissioning will be managed according to regulatory requirements and current practices and will be disposed of using established disposal routes.</p> <p>The costs of managing and disposing of non-radioactive hazardous waste from operations will be met from operational expenditure.</p> <p>The costs of managing and disposing of non-radioactive hazardous waste from decommissioning will be met from the Fund.</p>
<p>Waste minimisation</p>	<p>In line with regulatory requirements operators will be expected to set out the steps they will take to ensure that waste volumes and the costs of waste management and decommissioning</p>

	are limited throughout the station life; for example, by minimising the production of primary and secondary wastes ²³ consistent with the requirements and expectations of the nuclear regulators, and through careful segregation of waste arisings. Operators will be expected to have regard to the waste hierarchy ²⁴ in their DWMP and so avoid creation of waste where possible. Additionally new nuclear power stations are required to meet high environmental standards.
Waste conditioning	Waste will be conditioned in a manner and on a timescale which is consistent with current regulatory requirements.
Treatment of wastes arising as a result of station refurbishment	This will be managed in the same way as operational wastes and paid for from operational expenditure.

Classification of costs arising under the Base Case

Meeting the costs of decommissioning, waste management and waste disposal

2b.42 It will be important for operators (and others) to have clarity on which costs the Secretary of State would expect to be paid for from the Fund and which may be regarded as operational costs, which would not be paid for from the Fund. Table 3 shows which decommissioning, waste management and waste disposal costs will be expected to be discharged from the Fund and which would be expected to be met from operational expenditure.

²³ Secondary wastes are those wastes which are generated unavoidably as part of the waste management process itself.

²⁴ A hierarchical approach to minimise the amounts of waste requiring disposal. The hierarchy consists of non-creation where practicable, minimisation of arisings where the creation of waste is unavoidable; recycling and reuse; and, only then, disposal.

2b.43 Costs incurred during the generating life of the station are to be met from operational expenditure, except costs in relation to designated technical matters which will need to be met from the operator's Fund.

Table 3: Summary of principal cost streams and how they will be met

Cost	How cost will be met	Included in the Waste Transfer Price?
Decommissioning the station. Includes but is not limited to the dismantling and demolition of all plant systems and civil structures	Independent Fund	No
LLW		
Packaging and disposal of LLW from operations, including transport	Operational Expenditure	N/A
Packaging and disposal of LLW from decommissioning, including transport	Independent Fund	No
ILW		
Conditioning and packaging of operational ILW	Operational Expenditure	N/A
Construction and maintenance of interim stores for ILW ²⁵	Independent Fund	No
Conditioning and packaging of decommissioning ILW	Independent Fund	No
Transport of operational and	Independent Fund	No

²⁵ In line with the Nuclear Decommissioning and Waste Handling (Designated Technical Matters) Order 2010, if the interim stores are built as part of the station construction, the cost of their construction will not be met from the Fund.

decommissioning ILW for disposal		
Disposal of operational and decommissioning ILW	Independent Fund	Yes
Spent Fuel		
Operation of fuel ponds during the generating life of station	Operational Expenditure	N/A
Operation of fuel ponds after the generating life of station	Independent Fund	No
Construction and maintenance of interim stores for spent fuel ²⁶	Independent Fund	No
Transport of spent fuel for disposal	Independent Fund	No
Encapsulation of spent fuel for disposal	Independent Fund	No
Disposal of all spent fuel	Independent Fund	Yes
Non-radioactive hazardous waste		
Management and disposal of non-radioactive hazardous waste from operations	Operational Expenditure	N/A
Management and disposal of non-radioactive hazardous waste from decommissioning	Independent Fund	No
Planning		
Decommissioning planning before start of generation	Operational Expenditure	N/A

²⁶ In line with the Nuclear Decommissioning and Waste Handling (Designated Technical Matters) Order 2010, if the interim stores are built as part of the station construction, the cost of their construction will not be met from the Fund

Pre-closure decommissioning planning ²⁷	Independent Fund	No
Any planning carried out during decommissioning	Independent Fund	No
Other Costs		
All other costs associated with operating the site until the end of its generating life. These costs include, but are not necessarily limited to, those associated with maintaining the infrastructure necessary for the operator to be a holder of a nuclear site licence ²⁸	Operational Expenditure	N/A
All other costs associated with operating the site after end of its generating life and until the site licence is surrendered. These costs include, but are not necessarily limited to, those associated with maintaining the infrastructure necessary for the operator to be a holder of a nuclear site licence ²⁹	Independent Fund	No

²⁷ In line with the Nuclear Decommissioning and Waste Handling (Designated Technical Matters) Order 2010.

²⁸ These costs are likely to include the costs of security for the site, site monitoring, ongoing maintenance at the site (other than maintenance of the interim stores for ILW and spent fuel) and liaison with the regulators.

²⁹ These costs are likely to include the costs of security for the site, site monitoring, ongoing maintenance at the site (other than maintenance of the interim stores for ILW and spent fuel) and liaison with the regulators.

Part 2c: Funding Arrangements Plan Guidance

Content of the FAP

- 2c.1 This section of the Guidance contains guidance for operators of new nuclear power stations to assist them in drawing up an FAP. The FAP is that part of the FDP which addresses those matters referred to in section 45(7)(c) of the Energy Act (namely the security to be provided in connection with the estimates of costs of the designated technical matters). Together with the separate DWMP Guidance in Part 2b of this document, this Guidance provides information about the preparation and content of an FAP.
- 2c.2 The FAP should set out the operator's detailed arrangements for one or more Funds to deliver sufficient assets to meet the estimated costs of carrying out the plans as set out in the DWMP for the designated technical matters. In doing so, the FAP should set out details for establishing, contributing to, maintaining, managing and administering the Fund and for making disbursements from it, together with all or any other forms of additional security to address risks such as the insufficiency of the Fund.
- 2c.3 It is not intended that this Guidance be unduly prescriptive as to the legal structure and administrative arrangements for the Fund, nor is it to set out the relative advantages and disadvantages of possible vehicles which may be capable of discharging the various functions of the Fund in achieving the Objective and meeting the Guiding Factors.
- 2c.4 It is for the operator to decide how to structure its FAP. If, however, an alternative structure to the one set out below is used the operator should make clear how their proposal covers the following items:
- Background information
 - Description of Fund structure and constitutional arrangements
 - Explanation of Fund governance
 - Target Value for Fund and contribution schedule to the Fund
 - Process for reviewing the funding arrangements
 - Fund Investment Strategy
 - Payment and disbursement policy

- Financial security against early decommissioning risk and Fund insufficiency
- Proposals for remedial action to make good any shortfall in the Fund during station generating life
- Any future change in ownership or control of the operator or site
- Winding up the Fund

2c.5 The FAP, as part of the FDP submitted to the Secretary of State for approval, should be supported by documents setting out detailed analyses and justification of information provided under each of the subheadings given under the preceding paragraph and the fully termed agreements between the parties involved. It would assist the Secretary of State and NLFAB if an explanation could be provided alongside the FDP as to how any tax and accountancy analysis has driven the development of the operator's proposed FDP.

2c.6 The remainder of this part of the Guidance provides further information to assist operators in preparing and submitting the FAP component of the FDP for approval.

Creation of the Fund

2c.7 Further to the Objective set out in Part 1, the Secretary of State will expect that, prior to the moment when any reactor core of the nuclear power station to which the FDP relates is taken critical for the first time, the operator will have created the Fund to accumulate, invest and manage payments received to meet the costs of the designated technical matters.

Structure of the Fund

2c.8 In order to gain approval for its FDP the operator will be expected to propose a structure for the Fund which meets the Objective and which complies with the Guiding Factors.

2c.9 Any structure proposed must be demonstrably capable of accumulating and receiving sufficient funds to meet the plans as set out in the DWMP for the designated technical matters.

2c.10 Any structure proposed must ensure at all times the independence of the Fund (as defined in the paragraph 1.20 (Independence of Fund) in Part 1 of this Guidance) from the operator and protection from claims by the operator, other than in accordance with the FDP.

- 2c.11 The Fund and the Fund Assets must also be protected from the operator's creditors in the event of the operator's insolvency or the insolvency of an associated company of the operator. Ensuring that the Fund is a legally separate entity from the operator or from an associated company of the operator and that the Fund does not owe any obligations directly to any creditors of the operator would assist in meeting the principle in relation to insolvency remoteness.
- 2c.12 The Fund must also itself be insolvency remote such that it is protected from claims against the Fund Assets on its insolvency (see further paragraph 2c.20 below as to the factors which would assist in establishing the Fund as insolvency remote). Establishing the Fund within the jurisdiction of the Act would assist in meeting the principle in relation to insolvency remoteness of the Fund. Establishing the Fund elsewhere could reduce insolvency remoteness by making the Fund vulnerable to changes in local insolvency law as well as depriving the Fund of the protection conferred on it under section 56 of the Energy Act. Further, since certain forms of fund structure (such as trusts) are not widely recognised in civil law jurisdictions outside the UK, there are also risks that these kinds of structures could in future be re-characterised such that they would no longer be insolvency remote.
- 2c.13 An operator may decide to create a single Fund, or establish separate Funds for (a) the operator's decommissioning and waste management costs and (b) the operator's waste disposal costs. In either scenario, there must be transparency, and separate accounting and reporting of the two sets of liabilities (decommissioning and waste management on the one hand and waste disposal on the other).
- 2c.14 A Fund may be set up for each new nuclear power station or for a fleet of stations where they are under the same ownership. Where a Fund is set up for a fleet of stations, separate and transparent accounting of the liabilities and, if appropriate, the apportionment of assets for each site will be necessary. Any such arrangements would also have to meet the Objective and the Guiding Factors.
- 2c.15 Alternatively, an operator or a number of operators may set up a joint Fund arrangement in order to share administrative costs provided that such arrangement meets the Objective and complies with the Guiding Factors. If a joint Fund arrangement is used to meet the Objective for a number of stations or operators, then the individual Fund Assets must be accounted for separately.

The Role of the Fund

2c.16 Whilst the operator is ultimately responsible for discharging its own liabilities, the Fund should be established with the primary Objective of accumulating sufficient assets to meet the plans as set out in the DWMP for the designated technical matters.

2c.17 The FAP should set out the respective roles and responsibilities of the operator and the Fund and confer on those persons responsible for governance of the Fund powers and duties that are appropriate to the role. In particular, the FAP should set out the powers and duties of the relevant parties in relation to (but not limited to):

- setting the rate of contributions to be made by the operator to the Fund;
- investing, accumulating and managing Fund assets;
- reporting to the operator and to the Secretary of State on the performance and sufficiency of the Fund (in accordance with the proposed Regulations and also having regard to the Guidance (see section on “Annual report and quinquennial report” in Part 2a of this Guidance)); and
- disbursement of assets.

2c.18 The constitutional documents of the Fund should set out the powers, duties of and restrictions on the Fund in a manner such that these aspects cannot be revised, except with the approval of the Secretary of State through the submission of a modification to the FDP.

2c.19 The Secretary of State will also expect to see the Fund’s activities ring-fenced from the operator and its creditors and thereby insulated from liabilities and obligations owed to third parties by the operator.

2c.20 Under its constitutional documents restrictions applicable to the Fund will be expected to include requirements to:

- ensure Fund Assets are only applied for the purposes set out in the FDP;
- impose duties on the Fund to ensure the Fund Assets accumulate to meet the Objective;
- limit the activities of the Fund to the implementation of the FDP arrangements;

- control change to the permitted purpose and activities;
- maintain the Fund's own legal identity, including to maintain the Fund's own separate books, records, financial statements and accounts;
- not guarantee or otherwise be obliged for the debts of others;
- not pledge the Fund's credit for the benefit of others;
- prohibit or restrict the Fund from borrowing money or issuing securities;
- not make loans or advances or pledge (or provide security in respect of) its assets other than to the Government as security for its FDP;
- avoid entering into agreements (including employment contracts) under which the Fund may become liable to third parties, without an indemnity from the operator for liabilities arising out of such agreements; and
- ensure any relationship with others is on bona fide, arm's length terms.

2c.21 The operator will be expected to calculate the estimated costs of carrying out the plans as set out in the DWMP for the designated technical matters. The Fund will be expected to satisfy itself at least as to whether:

- the estimated costs of the plans set out in the DWMP for the designated technical matters have been appropriately verified; and
- the contributions, given the proposed Investment Strategy and likely investment returns, are likely to accumulate sufficient assets to meet the cost estimates.

Ownership of the Fund

2c.22 The ownership of the Fund should be independent of the operator and its associated companies as set out in Part 1 of this Guidance. If an element of operator ownership of the Fund is proposed, the Fund structure should ensure consistency with the Objective and Guiding Factors set out in Part 1 to this Guidance.

2c.23 The Fund must be insolvency remote and any entity within the overall structure (including any with ownership/membership interests in the Fund) should itself be established as insolvency remote from the Fund.

Governance of the Fund

2c.24 The Secretary of State will need to be satisfied that suitable arrangements are in place for the governance of the Fund. This includes not only such arrangements for the Fund itself (i.e. the body responsible for investing, accumulating and managing assets received) but also for any entity (such as a trust) with ownership or membership interests in, or control of, the Fund.

2c.25 The arrangements that the Secretary of State will expect to see included in the constitutional arrangements or structure of the Fund as regards to those responsible for the governance of the Fund will include:

- a properly constituted board or equivalent;
- a clear delineation of respective duties;
- appropriate restrictions on powers; and
- provisions to ensure that those with governance responsibilities for the Fund act with the appropriate level of skill and care in the performance of their functions.

2c.26 The governance arrangements will depend on the Fund structure adopted. Those responsible for the governance of the Fund should, however, be competent to perform that role, and the clear majority of them must be independent of the operator. Governance of the Fund should also be independent of the Government. The Secretary of State would therefore not expect to have any role in the appointment process of those responsible for Fund governance beyond being satisfied that both the appointment criteria and the continuing obligations of those responsible for Fund governance (both of which operators should include in the FAP) deliver the expected level of independence and competence.

2c.27 The operator must not have either direct or indirect control of the Fund. The Secretary of State is therefore unlikely to be satisfied by funding arrangements which leave control of the Fund in the hands of the operator or a majority of persons who are not independent of the operator. If the operator appoints non-independent persons to a governance role, then they must be in a minority.

2c.28 In all cases, those persons appointed to a governance role would be expected to affirm their competence and (with the exception of those appointed in a non-independent role) independence before accepting that appointment, and should be subject to a requirement to maintain their independence for the

duration of the appointment. If during the appointment a person can no longer demonstrate independence and competence, they should not continue in the role.

2c.29 Maintaining independence will include requiring those persons to avoid any situation (except in the case of non independent directors) in which that person has, or could have, a direct or indirect interest that materially conflicts, or may conflict, with their duties to the Fund. In the case of individuals, 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 Independence Principles³⁰ of the UK Corporate Governance Code. Without prejudice to the foregoing, and with the exception of those appointed to a non-independent role, neither an individual (together with his close relatives and family trusts) nor a corporate body (together with its associates) should hold (directly or indirectly) any investment in the operator or any of its associated companies which gives rise, or could reasonably be perceived to give rise, to an actual or potential conflict of interest.

2c.30 Competence can also be demonstrated in a number of ways. Appointees should be demonstrably fit and proper persons with the necessary education, experience and skills to hold the position. In the case of the appointment of a corporate body to govern the Fund, the Secretary of State would expect that the operator could demonstrate that the board of the corporate body has the requisite level of experience and resources (including individuals who demonstrate the same qualities described above) to manage the role.

2c.31 The arrangements under which the Fund is established should set out measures to ensure its longevity and continuance for the purpose for which it has been established including appropriate checks and balances as regards the succession of directors, members and trustees (as applicable) within the Fund structure. The following would assist in demonstrating independence:

- fixed term contracts which are renewable for a maximum number of terms;
- absence of control by the operator over board member succession;
- staggered appointment terms; and

³⁰ The relevant principles are currently contained section B.1.1 of the UK Combined Code http://www.frc.org.uk/documents/pagemanager/Corporate_Governance/UK%20Corp%20Gov%20Code%20June%202010.pdf

- provision for the removal of a director for a breach by it of the FDP or a breach of the independence requirements.

Target value for the Fund Assets and contributions to the Fund

Target value for the Fund

- 2c.32 The Secretary of State would expect the operator to set out in the FDP how it would make good any shortfall or risk of shortfall in the accumulated assets held by the Fund.
- 2c.33 For liabilities in respect of decommissioning and waste management, to minimise the risk that the funds accumulated are insufficient, the Fund Assets will be expected to be based on prudent assumptions, to accumulate at least 100 per cent of the estimated costs of carrying out the plans as set out in the DWMP for the designated technical matters.
- 2c.34 The Secretary of State will expect the Target Value for the Fund Assets to include a prudent risk-based contingency which the Fund would be expected to reassess periodically.
- 2c.35 The target amount for the Fund to meet the costs of waste disposal will be based on the Waste Transfer Price and the agreed schedule according to which payments must be made.
- 2c.36 The Secretary of State will expect the first payment to be made to the Fund no later than the date on which the reactor core is taken critical for the first time.
- 2c.37 The operator should set out, by way of the FAP, its proposals to ensure that in reasonable time before the date on which the station is expected to permanently cease electricity generation, there are assets in the Fund which, having regard to the expected investment performance of the Fund, will be sufficient to meet the estimated costs of carrying out the plans as set out in the DWMP for the designated technical matters.

Contributions to the Fund

- 2c.38 Payments to the Fund should be viewed as an essential matter during operation which must be serviced before debt and/or other costs as appropriate.
- 2c.39 To satisfy the Secretary of State that the operator will be capable of meeting the Objective, the FAP should set out the level of and schedule for contributions which the operator will make to the Fund and the basis on which modifications to the contribution schedule will be determined. The Secretary

of State will expect the Fund to set or approve the contribution schedule with reference to the approved Investment Strategy (see section on “Investment Strategy” in this part of the Guidance).

- 2c.40 Operators will need to ensure that the FAP takes account of both direct or indirect taxes. That will include corporation tax, income tax and/or capital gains tax on income and gains of the Fund, and the incidence of VAT on the acquisition of goods and services for the purposes of, and otherwise funded by, the Fund as well as (in appropriate cases) the incidence of VAT on supplies made by the FDP itself. Operators will also wish to consider the tax consequences of contributions made to the Fund and any payment received from the Fund, as well as the incidence of VAT of supplies of goods made to, or received from, the FDP.
- 2c.41 The FAP may set out the circumstances in which contributions to the Fund may be revised downwards, or surplus assets withdrawn from the Fund (see section on “Payment and disbursement policy” in this part of the Guidance).
- 2c.42 The Secretary of State anticipates that the preparation, revision and approval of FDPs will be a multi-stage process in which operators will have to satisfy him³¹ on a number of constituent parts of an FDP consecutively. It will be clear from what is set out above that the Investment Strategy (for example) and the Target Value of the Fund will need to be drawn up before the contribution schedule can be formulated.
- 2c.43 The Secretary of State will also expect to be provided with the views of the Fund on the arrangements set out in the FDP prior to approval of the FDP. He will therefore expect at least some of those persons responsible for managing the Fund to be identified or appointed before proposals on the Investment Strategy and contribution schedule are made. The Secretary of State will expect operators to make proposals as to how far in advance of the commencement of electricity generation those persons will need to be appointed or identified.

Dispute Resolution

- 2c.44 The terms setting out the relationship between the operator and the Fund should recognise that it will be for the Fund to set or approve the contribution schedule based upon the Investment Strategy put forward by the operator and approved in the FAP. The Secretary of State recognises the possibility of

³¹ The Secretary of State will call on the advice of the NLFAB in assessing the constituent parts of an FDP.

disputes arising between the operator and the Fund, particularly given the nature of the liabilities and costs involved and the length of time before those liabilities are expected to crystallise.

2c.45 The FAP should therefore include a fully scoped dispute resolution procedure to facilitate the timely and cost-effective resolution of disputes between persons with obligations under the FDP in respect of those matters.

2c.46 Whatever form (or forms) of dispute resolution are chosen the FDP should make clear whether the procedure and outcome is binding; the scope of the procedure (i.e. the disputes to which it relates if it does not relate to all disputes); and the time scales within which relevant steps have to be taken by the parties.

Investment Strategy

2c.47 The Secretary of State will expect the FAP to set out an Investment Strategy in an appropriate degree of detail. The Investment Strategy should be designed to ensure that the assets which the Fund receives from the operator will be appropriately invested to generate the sums necessary to meet the estimated costs of carrying out the plans as set out in the DWMP for the designated technical matters.

2c.48 The Investment Strategy will be set by the operator in consultation with the Fund and will be included in the FDP, by way of the FAP, for approval by the Secretary of State; the Secretary of State would expect to be informed of the views of the Fund as part of his decision making process. As a minimum, the Secretary of State would expect the Investment Strategy to include the Fund's:

- investment objectives;
- risk exposure limits and principles for the definition, measurement, mitigation and monitoring of risk;
- high-level asset allocation strategy for the lifecycle of the nuclear power station;
- permitted and prohibited asset (or class of assets) types and projected investment returns on each asset class. The FAP should set out the basis for the asset allocation strategy and include an economic and/or statistical justification for the projected investment returns;
- decision-making authorities, processes and procedures regarding investment decisions;

- performance measurement criteria and benchmarks;
- policy on realising investments;
- policy on exercising rights (including voting rights) attached to investments;
- policy on the extent to which social, environmental or ethical considerations are taken into account in investment decisions;
- mandates to all advisers and managers and associated fee and liability structures; and
- reporting requirements.

2c.49 The Investment Strategy must recognise and address associated risks, including:

- the likelihood of the strategy failing to achieve the target return;
- the risk of failing to meet its overall objectives on an ongoing basis;
- sponsor covenant risk/country risk;
- operator covenant risk;
- risk of inadequate diversification or inappropriate investment (concentration risk);
- issuer risk;
- currency and interest rate risk;
- liquidity risk;
- inflation risk;
- custodian risk; and
- organisational risk of the managers and advisers.

2c.50 In making or approving investment decisions, the Fund should act prudently having obtained appropriate professional advice and with due regard to the Investment Strategy. The Fund will not be restricted from delegating investment decisions to those with the skills, information and resources to

take them effectively but will remain responsible for ensuring that investments are made according to the approved Investment Strategy.

2c.51 The Fund should take account of the suitability of investments having regard to:

- the nature of the operator's future liabilities (especially the influence of inflation);
- the expected due date for disbursements by the Fund;
- the fact that the operator's liabilities are expected to be in Sterling;
- the certainty of expected future disbursements from the Fund; and
- the frequency and level of contributions to the Fund.

2c.52 It will also be necessary for operators to explain the rationale for the proposed Investment Strategy and to justify the assumptions that have been made about returns on investments made by the Fund as prudent.

2c.53 The operator, in consultation with the Fund, should review the Investment Strategy on a regular basis to ensure the continued appropriateness of the investment arrangements. The FAP should detail responsibilities and processes for reviews of the Investment Strategy. Changes to the Investment Strategy will be a modification to the FDP which will require approval by the Secretary of State under section 49 of the Energy Act.

Payment and disbursement policy

Decommissioning and Waste Management liabilities

2c.54 The disbursements policy of the Fund must be consistent with the section on 'Restrictions on use of Fund Assets' in Part 1 of this Guidance.

2c.55 Even with a contingency for risk and uncertainty built in, it is important that appropriate governance is exercised by the Fund in making disbursements from the Fund. The FAP should set out the disbursement policy for the Fund, including:

- the governance arrangements under which assets would be disbursed by the Fund in line with the approved FDP;
- the persons to whom payment will be made; and
- the mechanism for making and auditing payments.

- 2c.56 The FAP should address when and on what basis assets may be disbursed. Safeguards must be in place to ensure that assets are disbursed only in accordance with the FDP and that such payments are auditable and confirmed as appropriate.
- 2c.57 The FAP should set out the Fund's governance arrangements for overseeing the disbursement of Fund Assets. The Fund will be expected to review progress against the DWMP as set out in the FDP and, to the extent that a shortfall in funding is anticipated, the operator will be expected to fund the deficit.
- 2c.58 The operator will be expected to demonstrate to the Fund that it has appropriate procedures in place for checking that Fund Assets disbursed by the Fund are being applied against allowable DWMP costs and that milestones for achieving the DWMP are being met.
- 2c.59 The obligation on operators to provide annual reports will continue when assets are being disbursed against allowable DWMP costs. In such circumstances, changes recorded in the annual report must capture the differences between the payments from the Fund and the reduction in the operator's liabilities, as these involve changes to the cost estimates and changes to the security provided to meet such costs. The annual report may also set out the difference between the actual costs paid and the budgeted costs. The annual report should be prepared in consultation with the Fund so that they can provide input in relation to the changes to the security provided to meet the estimates of costs and the adequacy and accuracy of the information provided in the report in this respect.
- 2c.60 In circumstances where an operator's expenditure does not reduce the operator's liabilities by the required amount, it would be advisable for the annual report to set out how the operator intends to mitigate this use of additional funding and it should propose, if appropriate, a modification to the DWMP.
- 2c.61 Once all the operator's liabilities relating to the designated technical matters have been fully discharged and the operator or any other person with obligations under the FDP have been released from their obligations in accordance with section 64 of the Energy Act, the Fund can be wound up in accordance with the section on "Winding up of the Fund" in this part of the Guidance.
- 2c.62 The FAP may set out the circumstances in which contributions to the Fund may be revised downwards, or surplus assets withdrawn from the Fund where the actuarially assessed value of the Fund is significantly greater than its

Target Value at that point in time. These circumstances may include where the Fund's growth has significantly outperformed expectations and/or the technical solutions available for decommissioning reduce the anticipated costs substantially. The FAP should set out the extent to which the Fund will be required to consider whether a reduction in the contribution rate or withdrawal of surplus assets would be prudent, and what protections are in place if the Fund is not required to do so.

Change in ownership or control of the nuclear power station operator

2c.63 The FAP must be robust where there is a change of control or ownership of the operator or the Fund and, in particular, must set out safeguards to ensure that assets are not improperly disbursed by the Fund in this event.

Sufficiency of Fund

2c.64 The FDP, by way of the FAP, must set out the mechanisms it proposes to utilise and the Investment Strategy it intends to adopt to ensure that sufficient assets will be available in the Fund to meet in full the costs of the designated technical matters, including mechanisms to enable liabilities to be met in full and on their due date in the event of an insolvency of the operator or an associated company.

2c.65 The Secretary of State will expect mechanisms to be put in place to mitigate against the risk of the Fund Assets being insufficient, including for example, where the Fund Assets are:

- insufficient against the Target Value at any date during the generating lifetime of the station;
- insufficient against the Target Value at the date the station reaches the end of its generating life; and/or
- inadequate to meet the operator's liabilities during decommissioning and until all liabilities have been fully satisfied.

2c.66 Insufficiency at any time might arise because, for example:

- the power station has to be permanently closed and decommissioned early for technical reasons; or
- where there is a shortfall in the Fund as a result of either a re-assessment of the operator's liabilities or a reduction in the value of the Fund Assets; or

- lower than anticipated investment returns are achieved so that contributions have been insufficient.

Protection against an insufficient Fund

- 2c.67 As noted above, under the existing law an operator is responsible for all the liabilities in respect of decommissioning, waste management and waste disposal that arise from the operation of its nuclear power station.
- 2c.68 Under the provisions of the Energy Act, the Secretary of State may, under certain circumstances, seek to impose obligations on associated companies (such as a parent company), by proposing a modification to the FDP. This could happen if the operator fails to comply with its funding obligations under the FDP. Furthermore, under section 64 of the Energy Act the obligations on an operator (or former operator) under an FDP remain until the Secretary of State explicitly releases the operator from its obligations, even if it no longer holds a site licence. The Secretary of State would expect to use these powers with the aim of addressing the risk of insufficiency of the Fund, for example, in a case where the operator was a member of a group of companies or a joint venture company and it alone was not capable of addressing such risk to the Secretary of State's satisfaction.
- 2c.69 In addition, the operator must satisfy the Secretary of State that effective and transparent arrangements are in place, no later than when the reactor core is taken critical for the first time, as part of the approved FDP to ensure that the operator will meet its obligations to discharge its liabilities in full. In the FAP an operator must set out how it will manage and mitigate the risk that there are insufficient funds. An operator's proposals will be assessed by the Secretary of State on a case by case basis, by reference to the Objective and the Guiding Factors set out in Part 1 of this Guidance, to ensure that the risk of any recourse to public funds whatsoever remains remote at all times.
- 2c.70 The operator must make provision to manage and mitigate the risk of the Fund being insufficient (as set out in the section on "Sufficiency of Fund" in this part of the Guidance). Security against such risk could take the form of a material upfront endowment to the Fund (no later than when the reactor core is taken critical for the first time) together with a provision to front load contributions to the Fund during the early years of the power station's generating life. This may be an acceptable form of security against such risks where it is one amongst several elements of a proposal in this regard and provided it is structured on appropriate terms.

- 2c.71 Alternative forms of security, such as insurance or financial instruments (from an appropriate financial institution) or security over cash flows from the site may be acceptable to the Secretary of State to make up a shortfall in the assets held by a Fund, where it is one amongst several elements of a proposal.
- 2c.72 Parent company guarantees, on their own, may not be an acceptable form of security as protection against an insufficient Fund. The Secretary of State might find a parent company guarantee acceptable where it was one amongst several elements of a proposal in this regard. It would be essential for the parent company to have an acceptable credit rating at the time the FDP was first approved; that arrangements are in place to monitor the credit worthiness of the parent company; and if the parent company's credit rating should fall to an unacceptable level, the operator must immediately notify the Secretary of State and ensure supplemental arrangements, which are acceptable to the Secretary of State, are in place.

Winding up of the Fund

- 2c.73 An Operator will be required to set out in the FDP when and by what means the Fund will be wound up.
- 2c.74 The Secretary of State would expect the Fund to be wound up when:
- the operator and all other persons with obligations under the FDP have been released from their obligations in accordance with section 64 of the Energy Act;
 - all liabilities which it was established to satisfy have been fully paid and discharged and there is no risk of contingent liabilities arising, or alternative arrangements to meet those liabilities, which are acceptable to the regulators and the Secretary of State, have been put in place; and
 - any surplus assets have been disbursed as set out below.
- 2c.75 Further to the preceding paragraph, the Fund may also be wound up if the FDP arrangements are modified (as approved by the Secretary of State) so as to use a different Fund vehicle. For example, migration of the FDP structure from one form to another because of changes to insolvency law (such that the Objective in Part 1 of this Guidance is no longer met) which necessitates the winding up of the Fund and the creation of another.

- 2c.76 It is expected that any surplus assets held by the Fund once decommissioning is complete and all liabilities in respect of the designated technical matters have been discharged will be disbursed to the operator or as otherwise set out in the FDP.
- 2c.77 As set out in the section on Target Value of the Fund any shortfall in the Fund must be made good by the operator.

Annex A: Response form for the consultation document

You may respond to this consultation by email or by post.

Respondent Details	
Name:	
Organisation:	
Address:	
Town/ City	
County/ Postcode:	
Telephone:	
E-mail:	
Fax:	

Please return by 8 March 2011 to:
<p>Consultation on Revised FDP Guidance Office for Nuclear Development Department of Energy and Climate Change 3 Whitehall Place London SW1A 2AW</p> <p>You can also submit this form by email:</p> <p>decomguidance@decc.gsi.gov.uk</p>

Tick this box if you are requesting non-disclosure of your response.

No.	Question
1	Do you agree or disagree that the draft Guidance sets out what an approvable Funded Decommissioning Programme should contain to ensure that operators of new nuclear power stations (i) estimate the potential costs of decommissioning, waste management and waste disposal (i.e. the designated technical matters) and (ii) make prudent provision for meeting their liabilities? What are your reasons?
Response	
2	Does the draft Guidance contain sufficient information to enable operators of new nuclear power stations to understand the matters that their Funded Decommissioning Programmes should contain?
Response	

Please select the category below which best describes who you are responding on behalf of.

<input type="checkbox"/>	Business representative organisation/trade body
<input type="checkbox"/>	Central Government
<input type="checkbox"/>	Charity or social enterprise
<input type="checkbox"/>	Individual
<input type="checkbox"/>	Large business (over 250 staff)
<input type="checkbox"/>	Legal representative
<input type="checkbox"/>	Local Government
<input type="checkbox"/>	Medium business (50 to 250 staff)
<input type="checkbox"/>	Micro business (up to 9 staff)
<input type="checkbox"/>	Small business (10 to 49 staff)
<input type="checkbox"/>	Trade union or staff association
<input type="checkbox"/>	Other (please describe):

Thank you for taking the time to let us have your views. The Government does not intend to acknowledge receipt of individual responses unless you tick the box.

Annex B: The Consultation Code of Practice Criteria

The seven consultation criteria

Criterion 1 **When to consult**

Formal consultation should take place at a stage when there is scope to influence the policy outcome.

Criterion 2 **Duration of consultation exercises**

Consultation should normally last for at least 12 weeks with consideration given to longer timescales when feasible and sensible.

Criterion 3 **Clarity of scope and impact**

Consultation documents should be clear about the consultation process, what is being proposed, the scope to influence and the expected costs and benefits of the proposals.

Criterion 4 **Accessibility of consultation exercises**

Consultation exercises should be designed to be accessible to, and clearly targeted at, those people the exercise is intended to reach.

Criterion 5 **The burden of consultation**

Keeping the burden of consultation to a minimum is essential if consultations are to be effective and if consultees' buy-in to the process is to be obtained.

Criterion 6 **Responsiveness of consultation exercises**

Consultation responses should be analysed carefully and clear feedback should be provided to participants following the consultation.

Criterion 7 **Capacity to consult**

Officials running consultations should seek Guidance in how to run an effective consultation exercise and share what they have learned from the experience.

The code of practice is available at <http://www.bis.gov.uk/policies/better-regulation/consultation-guidance/code-of-practice>

Annex C: Glossary

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 –

- a) Decommissioning begins when the reactor is shut down with no intention of further use for the purpose of generating electricity.
- b) 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.
- c) Decommissioning ends when all station buildings and facilities have been removed and the site has been returned to an end state which has been 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 new 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 1.8 of this 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 for disposal in a GDF.

Energy Act or Act – means the Energy Act 2008.

FAP Guidance – means the Guidance set out at Part 2c of this document.

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 1.9 of this Guidance.

Generating lifetime – means the period beginning with the date on which the power station first generates electricity, 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 – the generic assessment being undertaken by the Health and Safety Executive and the Environment Agency of the suitability of new reactor designs for use in the UK.

Geological Disposal Facility (GDF) – a long term management option involving the emplacement of radioactive waste in an engineered underground facility or repository, where the geology (rock structure) provides a barrier against the escape of radioactivity and there is no intention to retrieve the waste once the facility is closed.

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 1.6 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.47 to 2c.53 of this Guidance.

Low level waste (LLW) – radioactive waste having a radioactive content not exceeding four gigabecquerels per tonne (GBq/te) of alpha or 12 GBq/te of beta/gamma activity.

Nuclear Liabilities Financing Assurance Board (NLFAB) – 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.

Objective – means the Objective set out in paragraph 1.5 of Part 1 of this Guidance.

Operator – 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 this 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.

Radioactive waste – has the meaning given by section 2 of the Radioactive Substances Act 1993.

Regulations – means regulations made pursuant to sections 50, 64 and 55 of the Energy Act. References to the Regulations in the draft Guidance are based on the proposed text of the Regulations which was published on 18 November 2010.

Repository – means a facility where waste is emplaced for disposal.

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 – has the meaning set out in section 45(5) of the Energy Act.

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 LLW;
- 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.

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