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# Office for Nuclear Regulation

An agency of HSE

## **Civil Nuclear Reactor Programme**

### **NNB GenCo Organisational Capability Arrangements – Workstreams 12 to 15**

Assessment Report: ONR-CNRP-AR-12-100  
Revision 0  
20 November 2012

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## ASSESSMENT REPORT

<b>Site:</b>	Hinkley Point C
<b>Project:</b>	Granting of a Nuclear Site Licence to NNB Generation Company Ltd to install and operate two EPR units at Hinkley Point C
<b>Title:</b>	NNB GenCo Organisational Capability Arrangements – Workstreams 12 to 15
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ASSESSMENT REPORT

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## EXECUTIVE SUMMARY

### Background

NNB Generation Company Ltd (NNB GenCo) has applied for a nuclear site licence to install and operate a twin EPR nuclear power reactor at Hinkley Point C (HPC) in Somerset. Before granting a nuclear site licence, the Office for Nuclear Regulation (ONR) must be satisfied that NNB GenCo has adequate management structures, capability and resources (organisational capability) to discharge the obligations associated with holding a nuclear site licence.

As part of ONR's assessment of this application, a review of the prospective licensee's organisational capability has been conducted in accordance with paragraph 98 of ONR's publication 'Licensing Nuclear Installations'. This paragraph states that *'ONR will seek an assurance that the applicant has suitable and sufficient organisational structure, resources and competencies to lead and manage for safety effectively by applying Safety Assessment Principles MS1 to MS4 on "leadership and management for safety" and the suite of supporting documents set out on the ONR website. The licensee will also need to demonstrate that its management system and arrangements for complying with the nuclear site licence conditions are adequate and that they are being implemented effectively before the licence is granted'*. Specific requirements of a licensable organisation are set out in paragraphs 65 to 69, 72 to 83 and 98 of Licensing of Nuclear Installations and these have been used as the basis for this assessment.

The assessment informs a judgement on whether a nuclear site licence should be granted to NNB GenCo to construct, commission and operate a power reactor at Hinkley Point C (HPC) in Somerset. It considers the adequacy of NNB GenCo's organisational capability and associated arrangements, and their implementation for the stage of development that NNB GenCo has reached at this point. It is recognised that NNB GenCo's organisational capability will continue to evolve as the project proceeds, and continuing ONR interaction with NNB GenCo is anticipated to gain assurance that the arrangements remain fit for purpose and that they are implemented effectively.

### Assessment and inspection work carried out by ONR

NNB GenCo has described its organisational capability in the Management Prospectus, Company Manual and Nuclear Baseline documents that were submitted with its nuclear site licence application. The adequacy of NNB GenCo's nuclear baseline, staff competence and training arrangements have been assessed separately and the findings from these assessments are recorded in reports ONR-CNRP-AR-12-098, ONR-CNRP-AR-12-096 and ONR-CNRP-AR-095 respectively.

This assessment focuses on verifying the adequacy of NNB GenCo's organisational capability as set out in paragraphs 65 to 69, 72 to 83 and 98 of ONR guide 'Licensing Nuclear Installations' and as described in NNB GenCo's Management Prospectus and Company Manual, with reference to NNB GenCo's Nuclear Baseline as appropriate. The scope of the assessment, which underpins the requirements set out in paragraphs 65 to 69, 72 to 83 and 98 of ONR's publication 'Licensing Nuclear Installations' covers NNB GenCo's arrangements for:

- Organisation status
- Leadership and duties of directors
- Relationship between NNB GenCo and parent companies
- Organisational capability
- Intelligent customer
- Design authority

The assessment has been informed by a number of working level meetings spread across four organisational capability workstreams over the last three years, a targeted intervention and structured discussions with a sample of NNB GenCo Board members.

The four organisational capability workstreams were:

- Workstream 12 – Management Prospectus
- Workstream 13 – Design Authority and Intelligent Customer
- Workstream 14 – Organisational Development and Nuclear Baseline
- Workstream 15 – Leadership and Governance

The working level meetings provided a forum for dialogue, for influencing the development of NNB GenCo's organisational capability and for monitoring progress with development of documentation and arrangements. NNB GenCo was able to demonstrate via these meetings that it has developed an organisational capability which meets ONR's expectations as defined in Licensing Nuclear Installations paragraphs 65 to 69, 72 to 83 and 98, Safety Assessment Principles MS.1 to MS.4 'Leadership and Management for Safety' and Technical Assessment Guides T/AST/049, T/AST/072, T/AST/079, and T/AST/080. The ongoing dialogue ONR and NNB GenCo have had in support of organisational capability development over the last three years has yielded positive benefits in terms of the approach adopted by NNB GenCo and the design of its organisation.

As part of ONR's licensing intervention strategy, workstream leads for various technical disciplines have monitored the development of NNB GenCo's organisational capability for their respective technical disciplines via the working level meetings that they have held with their NNB GenCo counterparts over the last three years. This assessment report takes into account their views of the adequacy of NNB GenCo's organisational capability arrangements in relation to their particular technical disciplines.

The HPC project is in its early phases and NNB GenCo's organisational capability is still being refined and developed. NNB GenCo has made significant progress and has established the key attributes of a good organisational capability. It was clear from the attitudes of staff involved in the working level meetings and the intervention, and the evidence of Board and senior management support that there is an ongoing forward momentum within the company to continue with positive development of the NNB GenCo's organisational capability and associated arrangements.

The HPC project lifecycle has a number of key phases such as design, construction, commissioning, operation, shutdown and decommissioning. NNB GenCo's organisational capability will need to be robust and flexible enough to ensure that it has adequate management structures, capability and resources to discharge its obligations associated with holding a nuclear site licence during in each of these phases.

### **Matters arising from ONR's work**

Some aspects of NNB GenCo's organisational capability are still evolving and, although the arrangements are considered to be sufficient for nuclear site licence granting, they have only been implemented on a limited basis or require further development and ONR will need to monitor their ongoing implementation and development.

### **Conclusions**

This report presents the findings of my assessment of NNB GenCo's organisational capability as defined in its Management Prospectus, Company Manual, Nuclear Baseline and supporting documents.

I am satisfied that that NNB GenCo's organisational capability and associated arrangements have adequately addressed the requirements of paragraphs 65 to 69, 72 to 83, and 98 of ONR guide

'Licensing Nuclear Installations', and other relevant standards. NNB GenCo's organisational capability is still evolving, but outstanding issues have been recognised and there is a strong forward momentum within the company to carry this development forward. This gives me confidence that NNB GenCo's organisational capability is sufficiently well advanced for this stage of the project.

### **Recommendations**

My recommendations are as follows:

- NNB GenCo's organisational capability should be considered adequate to support a decision by ONR to grant a nuclear site licence for Hinkley Point C.
- ONR should continue to monitor and influence the implementation and development of NNB GenCo's organisational capability.

**LIST OF ABBREVIATIONS**

AE	Architect Engineer
BMS	Business Management System
CM	Company Manual
DA	Design Authority
DIN	Division Ingénierie Nucléaire
HPA	Hinkley Point A
HPB	Hinkley Point B
HPC	Hinkley Point C
HR	Human Resources
HSE	Health and Safety Executive
HSEQ	Health, Safety, Environment and Quality
IA	Independent Assessment
IACO	Independent Assessment Challenge and Oversight
IAEA	International Atomic Energy Agency
IC	Intelligent Customer
ICP	Intelligent Customer Practitioner
IMS	Integrated Management System
INSAG	International Nuclear Safety Group
ITA	Independent Technical Assessment
KM	Knowledge Management
LC	Licence Condition
LNI	ONR guide 'Licensing Nuclear Installations'
MODEM	Monitoring and Decision Meeting
MSM	Management Systems Manual
MP	Management Prospectus
NB	Nuclear Baseline
NNB GenCo	NNB Generation Company Limited
NNB HoldCo	NNB Holding Company Limited
NSC	Nuclear Safety Committee
OCC	Operational Control Committee
OLIM	Organisational Learning and Incident Management
ONR	Office for Nuclear Regulation (an agency of HSE)
PAR	Project assessment Report

**LIST OF ABBREVIATIONS**

PCSR	Pre-construction Safety Report
PCmSR	Pre-commissioning Safety Report
POSR	Pre-operations Safety Report
PRODEM	Procurement Decision Meeting
RD	Responsible Designer
SAP	Safety Assessment Principle(s) (HSE)
SHEC	Safety, Health and Environment Committee
SMP	Safety Management Prospectus
SMS	Safety Management System
TAG	Technical Assessment Guide(s) (ONR)
TOR	Terms of Reference

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**Annexes**

- Annex 1: Level 4 meetings and interventions to discuss organisational capability.
- Annex 2: Documents considered

## 1 INTRODUCTION

### 1.1 Background

1 NNB Generation Company Ltd (NNB GenCo) has applied for a nuclear site licence to install and operate a twin EPR nuclear power reactor at Hinkley Point C in Somerset. As part of the assessment of this application, the Office for Nuclear Regulation (ONR) must be satisfied that NNB GenCo has adequate management structures, capability and resources, otherwise referred to as organisational capability, to discharge the obligations associated with holding a nuclear site licence. NNB GenCo has described its organisational capability in the Management Prospectus, Company Manual and Nuclear Baseline documents submitted with its nuclear site licence application.

2 The adequacy of NNB GenCo's nuclear baseline, staff competence and training arrangements have been assessed separately and the findings of these assessments are recorded in reports ONR-CNRP-AR-12-098, ONR-CNRP-AR-12-096 and ONR-CNRP-AR-12-095 respectively. This report presents the findings of the assessment of NNB GenCo's organisational capability as described in the Management Prospectus and Company Manual submitted with its nuclear site licence application, with reference to the Nuclear Baseline as appropriate.

3 Paragraph 98 of the ONR guide Licensing Nuclear Installations (Ref 2) requires ONR to seek assurance that NNB GenCo has suitable and sufficient organisational structures, resources and competencies to lead and manage for safety effectively by applying Safety Assessment Principles (SAPs) MS.1 to MS.4 on 'leadership and management for safety' (Ref. 3), and the suite of supporting Technical Assessment Guides (TAGs) (Ref. 4, 5, 6, 7 and 8). This assessment has concentrated on gaining that assurance through the suite of documentation provided with NNB GenCo's nuclear site licence application.

### 1.2 Scope

4 The scope of this report covers the adequacy of NNB GenCo's organisational capability and associated arrangements prior to drafting of ONR's Project Assessment Report (PAR) for licensing. My assessment has been undertaken before NNB GenCo's organisational capability is fully developed but at a point when sufficient progress has been made to enable me to assess its adequacy for this stage of the project.

### 1.3 Methodology

5 The methodology for the assessment follows ONR Business Management System (BMS) document AST/003, Permissioning Reports (Ref. 1), in relation to mechanics of assessment within the Office for Nuclear Regulation (ONR).

6 This assessment has focussed on the adequacy of NNB GenCo's organisational capability to discharge the obligations associated with holding a nuclear site licence. It addresses the requirements and expectations set out in paragraphs 65 to 69, 72 to 83 and 98 of the ONR guide 'Licensing Nuclear Installations', SAPS MS.1 to MS.4 and the suite of supporting TAGs. The assessment considers the documents which describe NNB GenCo's organisational capability and associated implementation arrangements and judges the adequacy of those arrangements to meet ONR's requirements and expectations.

## 2 ASSESSMENT STRATEGY

7 The assessment strategy for NNB GenCo's organisational capability is set out in this section and has been undertaken in line with the licensing workstreams as agreed between ONR and NNB GenCo. It identifies the scope of the assessment and the standards and criteria that have been applied. The essential aim of the strategy was to seek assurance that NNB GenCo has an adequate organisational capability to discharge the obligations associated with holding a nuclear site licence at the point when the licence is granted, and that it has robust and credible plans for maintaining and continuing to develop that capability post-licence granting.

8 I have engaged with NNB GenCo through a series of working level meetings to discuss the arrangements NNB GenCo has been developing to demonstrate that it has an adequate organisational capability to discharge the obligations associated with holding a nuclear site licence. The organisational capability licensing workstreams, and NNB GenCo workstream leads, as agreed between the two parties have been as follows:

- **Workstream 12 – Management Prospectus.** The Nuclear Site Licensing Project Manager has been the NNB GenCo workstream lead for developing the Management Prospectus;
- **Workstream 13 – Design Authority and Intelligent Customer.** The Head of Design Authority has been the NNB GenCo workstream lead for developing the Design Authority capability. The Design Authority Process and Improvement Manager has been the NNB GenCo workstream lead for developing the Intelligent Customer capability;
- **Workstream 14 – Organisational Development and Nuclear Baseline.** The Head of Organisational Capability has been the NNB GenCo workstream lead for organisational development and producing the Nuclear Baseline;
- **Workstream 15 – Leadership and Governance.** The Safety Director has been the NNB GenCo workstream lead for developing NNB GenCo's governance arrangements, Company Manual, nuclear safety advice and challenge capability, and nuclear safety culture;

9 I have used the working level meetings to influence and monitor progress with development and implementation of NNB GenCo's organisational capability. I carried out proportionate and targeted interventions to verify the adequacy of the governance arrangements and Design Authority capability. The governance intervention comprised structured discussions with a sample of Board members and shareholder representatives to verify the adequacy of NNB GenCo's Board arrangements, with particular emphasis on nuclear safety governance. The reports of the working level meetings, interventions and discussions are listed in Annex 1.

10 As part of ONR's licensing intervention strategy, workstream leads for control and instrumentation, electrical engineering, structural integrity, civil engineering, mechanical engineering, probabilistic safety analysis, internal hazards, external hazards, human factors and safety case production have assessed the adequacy of NNB GenCo's organisational capability for their respective technical disciplines. This assessment report takes into account their views of the adequacy of NNB GenCo's organisational capability in relation to their particular technical disciplines, as recorded in their individual assessment reports (see Annex 2).

## 2.1 Standards and Criteria

11 The relevant standards and criteria adopted within this assessment are principally the ONR guide 'Licensing Nuclear Installations' (Ref. 2) paragraphs 65 to 69, 72 to 83 and 98, Safety Assessment Principles (Ref. 3), internal ONR Technical Assessment Guides (TAGs), (Refs. 4, 5, 6, 7 and 8), relevant national and international standards (Refs. 9, 10, 11, 12, 13, 14 and 15), and relevant good practice informed from existing practices adopted for UK nuclear licensed sites. The key SAPs and relevant TAGs are detailed within this section. National and international standards and guidance have been referenced where appropriate within the assessment report. Relevant good practice, where applicable, has also been cited within the body of the assessment.

## 2.2 Licensing Nuclear Installations

12 Paragraphs 65 to 69, 72 to 83 and 98 of the ONR guide 'Licensing Nuclear Installations' have been applied within this assessment. These paragraphs identify the following requirements:

- Applicant organisation status
- Leadership: duties of directors
- Relationship between a parent company and a licensed subsidiary
- Organisational capability
- Intelligent customer capability

## 2.3 Safety Assessment Principles

13 The following SAPs have been applied within this assessment and are described in Table 1 of this report:

- MS.1 Leadership
- MS.2 Capable Organisation
- MS.3 Decision Making
- MS.4 Learning From Experience

## 2.4 Technical Assessment Guides

14 The following TAGs have been used as part of this assessment (Refs. 4 - 8):

- T/AST/049 – Issue 3 'Licensee Use of Contractors and Intelligent Customer Capability'
- T/AST/072 – Issue 1 'Function and Content of a Safety Management Prospectus'
- T/AST/079 – Issue 1 'Licensee Design Authority Capability'
- T/AST/080 – Issue 1 'Nuclear Safety Advice and Challenge'

## 2.5 National and International Standards and Guidance

15 Relevant international standards referred to for this assessment are listed in section 6 of this report.

## 2.6 Use of Technical Support Contractors

16 No supporting contractors were used.

## 2.7 Integration with Other Assessment Topics

17 This assessment has focussed on verifying the adequacy of NNB GenCo's organisational capability as described in the Management Prospectus and Company Manual. Assessment of NNB GenCo's arrangements for Licence Condition 10 Training, Licence Condition 12 Duly Authorised and Other Suitably Qualified and Experienced Persons, Licence Condition 13 Nuclear Safety Committee, and Licence Condition 36 Organisational Capability (nuclear baseline and control of organisational changes) are also an integral part of NNB GenCo's organisational capability. Although these arrangements have been assessed separately (see Annex 2), the findings identified in the assessment reports have been taken in to account during this assessment.

18 As part of ONR's licensing intervention strategy, workstream leads for control and instrumentation, electrical engineering, structural integrity, civil engineering, mechanical engineering, probabilistic safety analysis, internal hazards, external hazards, human factors and safety case production have assessed the adequacy of NNB GenCo's organisational capability for their respective technical disciplines. This assessment report takes into account their views of the adequacy of NNB GenCo's organisational capability in relation to their particular technical disciplines, as recorded in their individual assessment reports (see Annex 2).

## 2.8 Out-of-scope Items

19 The adequacy of NNB GenCo's Nuclear Baseline has been assessed in the report ONR-CNRP-AR-12-098 'Licence Condition 36 Organisational Capability Compliance Arrangements' and is not included in the scope of this assessment. However, since the Nuclear Baseline describes elements of NNB GenCo's organisational capability it is referenced extensively throughout this assessment.

**3 LICENSEE'S SAFETY CASE**

20 NNB GenCo's Management Prospectus, Company Manual and Nuclear Baseline and associated arrangements have been regarded as its 'organisational safety case' for nuclear site licence granting. Documentation considered during this assessment is identified in Annex 2.

## **4 ONR ASSESSMENT**

21 This assessment has been carried out in accordance with ONR procedure AST/003, Permissioning Reports (Ref. 1).

### **4.1 Scope of Assessment Undertaken**

22 The aim of my assessment was to gain assurance that NNB GenCo's organisational capability has met ONR's requirements for nuclear site licence granting as set out in paragraphs 65 to 69, 72 to 83 and 98 of the ONR guide 'Licensing Nuclear Installations' (Ref. 2).

23 NNB GenCo's organisational capability is described in its Management Prospectus and Company Manual and the scope of this assessment is to verify the adequacy of the arrangements described in these documents. NNB GenCo's Nuclear Baseline also describes its organisational capability and, although this document has been assessed separately in the report ONR-CNRP-AR-12-098 'Licence Condition 36 Organisational Capability Compliance Arrangements' the document has been referenced extensively during this assessment.

24 ONR considers that a licensee's capability to manage its activities safely is strengthened by the presence of an informed and authoritative source of advice and a robust internal challenge capability. The Management Prospectus and Company Manual both refer to NNB GenCo having in place an Independent Assurance function to maintain oversight of NNB GenCo's activities which will report on safety and overall organisational performance to the NNB GenCo Board and its supporting committees as appropriate. The Independent Assurance function is a key part of NNB GenCo's organisational capability and nuclear safety governance arrangements and it has been included in the scope of this assessment.

25 ONR guide 'Licensing Nuclear Installations' also expects a licence applicant to be able to demonstrate that it will be an Intelligent Customer for any work it commissions externally and to have sufficient knowledge of the plant design and safety case for all plant and operations and to be able to demonstrate ongoing control of the design of the plant through a Design Authority function. The adequacy of NNB GenCo's Intelligent Customer and Design Authority capabilities are therefore included in the scope of this assessment.

### **4.2 Assessment**

26 I have engaged with NNB GenCo through a series of working level organisational capability workstream meetings (see Annex 1) to discuss the development and adequacy of NNB GenCo's arrangements based on the requirements identified in sections 2.1, 2.2, 2.3 and 2.4 of this report. NNB GenCo provided a suite of documentation with its nuclear site licence application which describes its organisational capability based on these discussions (Refs 16, 17 and 18).

27 This assessment has been structured to assess the adequacy of NNB GenCo's organisational capability as described in the suite of documentation provided with its nuclear site licence application against the requirements set out in the ONR guide 'Licensing Nuclear Installations' paragraphs 65 to 69, 72 to 83 and 98 as identified in Section 2.2 of this report, and using the expectations set out the Safety Assessment Principles and Technical Assessment Guides identified in Sections 2.3 and 2.4. The relationship between the requirements set out in Licensing Nuclear Installations and the Technical Assessment Guides is as follows:

'Licensing Nuclear Installations' Requirement	Relevant Technical Assessment Guide	
	Number	Title
Applicant organisation status Leadership: Duties of directors	T/AST/072	Function and Content of a Safety Management Prospectus
Organisational capability	T/AST/080	Nuclear Safety Advice and Challenge
Intelligent customer capability	T/AST/049	Licensee Use of Contractors and Intelligent Customer Capability
Design Authority capability	T/AST/079	Licensee Design Authority Capability

28 I have assessed the adequacy of the arrangements described in the suite of documents, and their implementation, through review of the submitted documentation and regular engagement with NNB GenCo, supported by a targeted intervention and structured discussions with a sample of NNB GenCo Board members and shareholder representatives.

29 NNB GenCo's organisational capability is still being refined and developed in some areas and interventions were limited to verifying the adequacy of the Design Authority capability where the arrangements were of reasonable maturity and the adequacy of their application could be assessed. The structured discussions held with a sample of Board members and shareholder representatives were intended to verify the adequacy NNB GenCo's governance arrangements, with particular emphasis on nuclear safety governance.

30 As part of ONR's licensing strategy, workstream leads for control and instrumentation, electrical engineering, structural integrity, civil engineering, mechanical engineering probabilistic safety analysis, internal hazards, external hazards, human factors and safety case production have monitored the development of NNB GenCo's organisational capability for their respective technical disciplines via the working level meetings that they have held with their counterparts over the last three years. This assessment report takes into account their views of the adequacy of NNB GenCo's organisational capability arrangements in relation to their particular technical disciplines as recorded in their individual assessment reports (see Annex 2).

#### 4.3 NNB GenCo Organisation Status

31 Paragraphs 66 to 69 of LNI set out ONR's requirements of a nuclear site licence (NSL) applicant organisation status. NNB GenCo has submitted a Management Prospectus (MP) and a Company Manual (CM) as part of its NSL application. These documents describe NNB GenCo's arrangements to meet the requirements of paragraphs 66 to 69 of LNI as follows:

32 Section 2.1.1 of the MP advises that NNB GenCo is a private limited company incorporated in the UK, with the company number 06937084.

33 NNB GenCo submitted its Memorandum of Association and Articles of Association (see Annex 2) with its nuclear site licence application and they set out the company's constitution.

34 Section 8 of the CM confirms NNB GenCo as the corporate body which will operate the Hinkley Point C (HPC) site with sole responsibility for the conduct of all nuclear site licensed activity.

35 My judgement is that NNB GenCo's organisation status as corporate body which will operate the HPC site meets the requirements of paragraphs 66 to 69 of LNI.

#### 4.4 Leadership: Duties of Directors

36 Paragraphs 72 to 74 of LNI set out ONR's expectations of the NNB GenCo Board. These expectations are set out in more detail in Technical Assessment Guide (TAG) T/AST/072 'Function and Content of a Safety Management Prospectus'. The responsibilities of the NNB GenCo Board for health and safety management are set out in its MP and CM as follows:

37 Section 2.1.2 of the MP sets out NNB GenCo's vision and values. The NNB GenCo Health, Safety, Environment and Quality Policy is provided as Appendix B to the MP.

38 NNB GenCo's 'vision' is very visible throughout NNB GenCo's head office at the Qube in London. NNB GenCo has been able to demonstrate to me that the vision, values and business objectives are aligned through its governance arrangements.

39 Section 3 of the CM restates the NNB GenCo vision, values and HSEQ Policy. It notes that the HSEQ Policy explains that safety and care for the environment are NNB GenCo's overriding priorities, and provides a commitment to behave in a safe and ethical manner.

40 Paragraph 11 of the CM provides a shared understanding of what is important to NNB GenCo through six bullet point statements which reinforce the values.

41 Paragraph 12 of the CM provides a commitment to a strong nuclear safety culture, encompassing a set of expectations which includes a reference to leaders demonstrating a strong commitment to safety.

42 Section 2.1.3 of the MP describes the organisation of NNB GenCo including the composition of the Board, numbers of Executive and Non-Executive Directors and Board meeting attendees.

43 Section 2.3.1 of the MP describes the responsibilities of the NNB GenCo Board. It references the Board's responsibility for overseeing effective safety arrangements and the contribution that leadership and behaviours of the NNB GenCo Board make to effective governance of the Company. The role of the Safety Director in providing support to the Board for all safety, environmental protection, security, health and quality related matters is referenced.

44 Section 2.3.3 of the MP describes NNB GenCo's safety governance responsibilities which are enacted through the NNB GenCo Board. Reference is made to the Board's role in implementing a strong nuclear safety culture.

45 Sections 2.4.1 to 2.4.9 of the MP describe the roles and responsibilities of the Managing Director, Executive Directors, Non-Executive Directors and Company Secretary. The roles and responsibilities described align with expectations relevant to the pre-construction phase of the HPC project as set out in TAG 072.

46 NNB GenCo's governance arrangements are assessed in more detail in section 4.6.3 of this report.

47 My judgement is that NNB GenCo's MP and CM adequately describe the role of the NNB GenCo Board in setting the direction for effective health and safety management, establishing a health and safety policy and taking the lead in communicating health and safety duties and benefits in accordance with paragraphs 72 to 74 of LNI.

#### **4.5 Relationship between NNB GenCo and Parent Companies**

48 Paragraph 75 of LNI sets out ONR's expectation of a parent company's relationship with a licensed subsidiary. NNB GenCo's MP and CM describe its arrangements to meet these expectations as follows:

49 Section 2.1.1 of the MP describes NNB GenCo as a wholly owned subsidiary of NNB Holding Company Limited (NNB HoldCo) which is a joint venture held 80% by EDF Energy Holdings Limited, and 20% by Centrica plc through its subsidiary company, GB Gas Holdings Limited. The legal structure of the EDF Group is set out in Figure 1 of the MP.

50 Section 8 of the CM describes NNB GenCo's relationship with NNB HoldCo and EDF Energy (UK) Limited as its UK parent company. It describes NNB GenCo's relationship with Electricité de France SA, as the ultimate parent company in the group, and its affiliated companies and divisions including Division Ingénierie Nucléaire (DIN) as the source of detailed EPR design knowledge.

51 Section 8 of the CM notes that funding must be sufficient to allow the discharge of this responsibility. NNB GenCo has advised that the NNB HoldCo Shareholders' Agreement governs the basis on which NNB HoldCo and NNB GenCo will be financed and that adequate financial resources will be available to NNB GenCo to discharge its duties as a nuclear site licensee. The adequacy of NNB GenCo's financial resources has been assessed by ONR in the report ONR-CNRP-AR-12-098 'Licence Condition 36 'Organisational Capability Compliance Arrangements' (see Annex 2).

52 Section 2.1.1 of the MP advises that NNB GenCo is structured to have sole responsibility for licensed activity relating to the design, construction, commissioning, operation and eventual decommissioning of UK EPRs.

53 Section 2 of the CM states that NNB GenCo will have control of all activities required to be conducted under its NSL.

54 I clarified the relationships between NNB GenCo and NNB HoldCo, and NNB GenCo and EDF Energy UK Limited as its UK parent company, during discussions with a sample of NNB GenCo and NNB HoldCo Board members from 24 to 26 April 2012 (see Annex 1). Discussions with the Centrica representative on the NNB HoldCo Board and the NNB GenCo Finance Director (also the EDF Energy Director of Strategy and Corporate Affairs) gave me confidence that Centrica and EDF Energy would not usurp NNB GenCo's authority over its operations.

55 My judgement is that NNB GenCo's MP and CM adequately demonstrate that its relationship with parent companies will neither be detrimental to safety nor impinge on NNB GenCo's legal responsibilities in accordance with the expectations set out in paragraph 75 of LNI.

## 4.6 Organisational Capability

56 Paragraphs 76 to 83 of LNI set out ONR's expectations for licensee organisational capability. NNB GenCo's MP describes its arrangements to meet these expectations and those set out in the supporting TAG 072 as follows:

### 4.6.1 Management Prospectus

57 Paragraph 78 of LNI expects a licence applicant to develop a Safety Management Prospectus (SMP) documenting and demonstrating the adequacy of its arrangements for managing health and safety. TAG 072 provides for an applicant to adopt an integrated approach to its business and the way in which safety, environment, security and safeguards are managed. In such instances the SMP may be replaced by a single integrated MP as NNB GenCo has chosen to do. The terms Safety Management Prospectus (SMP) and Management Prospectus (MP) should be regarded as synonymous for the purpose of this assessment.

58 NNB GenCo has submitted an integrated Management Prospectus (MP), rather than a separate Safety Management Prospectus, with its nuclear site licence application covering early activities to be undertaken during the pre-construction phase of the HPC project to demonstrate how it will manage nuclear safety, radiological safety, environmental protection, industrial safety, physical security and quality.

59 NNB GenCo's MP is supported by a Company Manual (CM) which describes NNB GenCo's governance arrangements in more detail, and a Management System Manual (MSM) which describes the overarching and integrated business process framework for NNB GenCo. This assessment considers the adequacy of the requirements described in the MP and supported by the CM and MSM.

60 The elements of a SMP that ONR expects a licence applicant to develop are set out in TAG 072. NNB GenCo's MP demonstrates how it meets these elements as described in the following sections 4.6.2 to 4.6.6.

### 4.6.2 Activities

61 This element expects a SMP to provide a clear description of the type of activities carried out on the licensed site showing how the safety management arrangements set out in the SMP are appropriate and proportionate to the specific hazards, risks and scale of operations. NNB GenCo's MP describes how this expectation is met as follows:

62 Section 1, paragraph 3 describes NNB GenCo's type of undertaking, core activities and the scale of operations. It notes that it intends to build and operate four EPRs in the UK of which two will be at Hinkley Point in Somerset and two at Sizewell in Suffolk.

63 Section 1, paragraph 4 advises that the hazards in the pre-construction phase are potentially latent i.e. hazards which may appear in future phases of the project as result of design and manufacturing work being currently undertaken, and industrial safety hazards arising from preliminary works on site.

64 Section 1, paragraph 5 advises that NNB GenCo has processes in place to control the design, assess and accept it, and that safety cases will be produced to support the design and demonstrate that it is robust with the highest standards of nuclear safety.

65 Section 1, paragraph 7 gives a clear indication of the stage of the lifecycle that the HPC project has reached. It clearly states that the MP considers early activities NNB GenCo will undertake during the pre-construction phase.

66 Section 1, paragraph 8 provides a commitment to setting high standards in nuclear safety that deliver best practice taking into consideration international requirements.

67 Section 1, paragraphs 10, 11 and 12 describe how NNB GenCo will achieve excellence in safety and provide nuclear safety governance.

68 Section 1, paragraph 15 notes the need to have developed processes and an organisation to support the safe procurement of materials and services relating to the build of HPC.

69 Section 3.1 describes the location of the HPC site, its proximity to Hinkley Point A (HPA) and Hinkley Point B (HPB) stations, and the requirement to develop new Nuclear Safety Cooperation Agreements between NNB GenCo (HPC), Magnox Limited (HPA) and EDF Energy Nuclear Generation Ltd (HPB). It notes that the land that comprises the HPC nuclear licensed site falls into three landholdings and will be leased to NNB GenCo under the terms of 999 year leases. The leases will give NNB GenCo exclusive possession and the right to control access to the site. Reference is made to the safety case for the EPR and its construction being contained in the HPC Pre-Construction Safety Report (PCSR).

70 Section 3.2 provides a basic EPR description including the design philosophy, operating design life and key structures contained within the EPR unit.

71 My judgement is that NNB GenCo's MP provides a clear description of the type of activities to be carried out on the licensed site during the pre-construction phase and shows how the safety management arrangements set out in the MP are appropriate and proportionate to the specific hazards, risks and scale of operations.

#### **4.6.3 Governance**

72 This element expects a SMP to set out the organisation's approach to the governance for nuclear safety. NNB GenCo's MP and CM describe how this expectation is met as follows:

73 Section 2.3.1 of the MP describes the responsibilities of the NNB GenCo Board. It references setting the Company's strategic aims, providing the leadership to put the aims into effect and supervising the management of the business to ensure effective implementation of NNB GenCo's strategy. It notes the NNB GenCo Board's responsibility for overseeing effective safety arrangements.

74 Section 2.3.1 of the MP states that effective governance of the company depends on the leadership and behaviours of the NNB GenCo Board and that the Board is accountable for all safety-related decisions and is responsible for all safety-significant activities. It states that the NNB GenCo Board ensures that safety, security and environmental issues are a part of every meeting of the NNB GenCo Board and integral to how the NNB GenCo Board works. I confirmed this through scrutiny of a sample of NNB GenCo Board meeting minutes.

75 Section 2.3.1 advises that the NNB GenCo Board is supported in all safety, environmental protection, security, health, and quality matters by the Safety Director to ensure that all decisions taken by the Board are taken after full consideration of the implications of a decision. The Safety Director reports directly to the Chairman and Managing Director and, although not a member of the Board, attends all Board meetings to provide independent advice and guidance. NNB GenCo has confirmed that the Safety Director has recourse to the nuclear experienced Non-Executive Director for independent

advice and guidance and meets with the Non-Executive Director before every Board meeting to review matters of safety significance.

76 Section 2.3.2 of the MP describes the Board's responsibilities for directing the affairs of NNB GenCo. These include setting the Company's overall direction through its vision, values and strategic performance, establishing a corporate governance structure, overseeing and reviewing safety governance arrangements, establishing and reviewing a system of internal controls, approving policies and procedures for the identification, assessment and management of risks.

77 Section 2.3.3 of the MP describes safety governance arrangements and the NNB GenCo Board's safety responsibilities which are reflected in the Terms of Reference (TOR) for Board meetings. It notes that the NNB GenCo Board and Safety Director are supported by the Safety Health and Environment Committee (SHEC) and the Nuclear Safety Committee (NSC). I have attended a meeting of the SHEC on one occasion and NSC meetings on two occasions (see Annex 1) and I was satisfied that the conduct of both meetings was in accordance with their respective terms of reference and responsibilities as described in paragraphs 2.6.1 and 2.6.2 of the MP. I have not assessed the relationship between the SHEC and the NNB GenCo Board but NNB GenCo has been able to demonstrate that safety metrics considered by the SHEC are included in the NNB GenCo Board Monthly Performance Pack and I consider this to be satisfactory.

78 Section 2.3.3 of the MP states that the Safety Director will have in place an independent assurance function (called the IACO team), to maintain oversight of NNB GenCo's activities which will report on safety and overall organisational performance to the NNB GenCo Board and its supporting committees as appropriate. ONR's expectations of this function are set out in TAG T/AST/080 'Nuclear Safety Advice and Challenge'. Assessment of the adequacy of this function and its arrangements is described in Section 4.7 of this report.

79 Section 2.4 of the MP describes the NNB GenCo Board structure and membership. The roles and responsibilities of individual NNB GenCo Board members are described in sections 2.4.1 to 2.4.9 of the MP. The NNB GenCo Board has been strengthened over the last year by the appointment of three Non-Executive Directors with in depth experience in nuclear safety, construction and strategy. The NNB GenCo Safety Director, although not a Board member, attends Board meetings to provide the Chairman and Board with assurance and advice on all aspects of safety.

80 I have reviewed the NNB GenCo Board TOR (see Annex 2) and I am satisfied that 'overseeing safety governance arrangements' is included in the scope of the NNB GenCo Board's responsibilities and that the Board's oversight activities are explicitly identified in the TOR. These activities are aligned with SAPs MS.1 to MS.4. The TOR also stipulate that decisions with significant nuclear safety impact require unanimous agreement of all Board Directors.

81 I have reviewed a sample of meeting agendas (see Annex 2) and I am satisfied that a safety message is the first item on the agenda and that nuclear safety features prominently in papers submitted to Board meetings for either approval or information.

82 I have reviewed a sample of meeting minutes (see Annex 2) and I noted that the salient points relating to discussions about the safety message are recorded and that the safety report presented by the Safety Director is the first item in the NNB GenCo Performance Report section of the agenda.

83 NNB GenCo has shared an example of a Board Monthly Performance Report with me (see Annex 2) and, although the report format and content is still being developed, I observed that safety is the first item in the Executive Summary and the Safety Director's report is the first substantial item in the report. The report provides overviews relating to industrial safety, organisational learning and assurance. Nuclear safety is not explicitly highlighted in the report but NNB GenCo has recognised this and is currently developing appropriate reporting arrangements.

84 I carried out structured, informal discussions with a sample of NNB GenCo Board members from 24 to 26 April 2012. Topics discussed included conduct of Board business, leadership and staff engagement, nuclear safety oversight and challenge, and the roles of Executive and Non-Executive Directors. I concluded from the discussions that the conduct of Board business was improving.

85 ONR has previously expressed concern to NNB GenCo about a lack of independent representation on the NNB GenCo Board. This has been addressed by NNB GenCo through the appointment of Non-Executive Directors with strong and relevant experience, especially to nuclear safety and to the construction stages of the HPC project. I consider that this has provided welcome experience and challenge and helped the NNB GenCo Board to take a more strategic perspective.

86 As part of the structured, informal discussions with NNB GenCo Board members, I held discussions with two Centrica shareholder representatives, one of which is a member of the NNB HoldCo Board, and the NNB GenCo Non-Executive Director for strategy who is also Director of Corporate Strategy and Corporate Affairs for EDF Energy UK Ltd. The discussions gave confidence that these shareholder representatives understood NNB GenCo's responsibilities as the licensee organisation, as the 'body corporate' and 'controlling mind', and would not usurp NNB GenCo's authority over its operations. It was also made clear to me that, via the NNB HoldCo Shareholders' Agreement, adequate financial resources will be made available to allow the licensee organisation to meet its statutory obligations. The assessment report ONR-CNRP-AR-12-098 'Licence Condition 36 Organisational Capability Compliance Arrangements' addresses this aspect in more detail (see Annex 2).

87 The ONR Superintending Inspector, Organisational Capability and Nuclear Site Licensing, attended a meeting of the NNB GenCo Board as an observer on 25 April 2012 and concluded that there was evidence of good awareness by the Board of its collective responsibility for nuclear safety and the need for oversight of nuclear safety-related activities throughout the company. The Board meeting was well-conducted and all members were encouraged to contribute, nuclear safety received proportionate attention and priority, and a suitable level of challenge was presented.

88 Section 2.5 of the MP describes the responsibilities of the NNB GenCo Executive for the day to day management of the business as being to ensure that the company operates safely and complies with legislative and regulatory requirements; that competent persons and other resources are provided throughout the company; and that appropriate internal control processes are implemented to ensure high levels of safety. The roles and responsibilities of the Safety Director, HPC Site Construction Director and Pre-Operations Director as members of the Executive are described in sections 2.5.3 to 2.5.5 of the MP. I have not assessed the relationship between the NNB GenCo Executive and Board but feedback from the discussions with NNB GenCo Directors indicated that the day to day operational role of the Executive and the strategic role of the Board have been clarified as the Board has evolved.

89 Section 2.6 of the MP describes the committees that the NNB GenCo Board uses to assist it to discharge its responsibilities. The SHEC and the NSC are the principal safety committees and sources of advice for the NNB GenCo Board. The MP refers to the Operational Control Committee (OCC) as having an important role in overseeing safety, security and environmental matters in relation to NNB GenCo's operations, overseeing quality assurance programme effectiveness, overseeing the development and management of the resources required to effectively support the operation of the UK EPRs, reviewing the allocation of resources, overseeing the implementation of an adequate management system and monitoring risks associated with NNB GenCo's operations. I have not reviewed the terms of reference, sampled the minutes or observed proceedings of the OCC.

90 NNB GenCo is currently revising its MP and has shared a draft with ONR. Sections 2.6.3 and 2.6.4 of the revised MP introduce two new committees to assist the Board to discharge its responsibilities. These are the Monitoring and Decision Meeting (MODEM) and the Procurement Decision Meeting (PRODEM). The role of the MODEM is to ensure the establishment of the EPR basic design for HPC, and the role of the PRODEM is to monitor the procurement phases and to make the required decisions on procurement topics in a timely manner. I have not reviewed the terms of reference, sampled the minutes or observed the proceedings of these meetings.

91 My judgement is that NNB GenCo's MP, supported by the CM, adequately sets out NNB GenCo's approach to the governance for nuclear safety.

#### 4.6.4 Organisational Structure

92 This element expects a SMP to describe how the organisational structure meets the nuclear safety management needs of the business. NNB GenCo's MP and NB describe how this expectation is met as follows:

93 Section 2.1.3 of the MP describes the organisation of NNB GenCo. It describes the employment model adopted by NNB GenCo as follows:

- NNB GenCo' Executive Directors, with the exception of the EPR Architect Director and the Client Construction Director who are employed by EDF SA, are employed by NNB GenCo. ONR has confirmed that it has no objection to this arrangement.

- NNB GenCo has advised that all personnel below Board level will be seconded into NNB GenCo from EDF Energy plc or EDF SA. This is via two secondment agreements; one between NNB GenCo and EDF Energy plc, and one between NNB GenCo and EDF SA. These secondment agreements ensure personnel seconded into NNB GenCo are managed by NNB GenCo and are fully embedded into the organisation effectively as employees. NNB GenCo has shared the Secondment Agreements with ONR and ONR has confirmed that it has no objection to this arrangement.

94 Section 4.3 of the NB states that NNB GenCo's policy is to meet its safety, environmental and nuclear site licence obligations through a capable team operating in accordance with approved arrangements, drawing on competent contractors whose skills complement and extend the NNB GenCo licensee organisation. Where individuals are embedded in the NNB GenCo organisation and carry out a nuclear safety related role on

behalf of the Company, they are considered to be part of the NNB GenCo licensee organisation. Contractors that do not meet the criteria for embedded contractors are overseen in line with NNB GenCo's Intelligent Customer (IC) arrangements. The adequacy of these arrangements is assessed in Section 4.8 of this report.

95 Section 5 of the MP describes NNB GenCo's organisational capability. It refers to the Nuclear Baseline (NB) as an integral part of the arrangements that demonstrate that NNB GenCo is an 'intelligent operator' and a capable licensee. It shows that it has the organisation, resource and competences needed for the pre-construction phase and is preparing for the capability challenges of the future. Part B of the NB includes full organisation charts. The adequacy of the NB was assessed in the report CNRP-AR-12-098 'Licence Condition 36 Organisational Capability Compliance Arrangements' (see Annex 2).

96 Section 2.2 of the MP describes the role of the Architect Engineer (AE) and Responsible Designer (RD). It states that whilst NNB GenCo will be the nuclear site licensee it will be supported by its parent company EDF SA including EDF SA's nuclear engineering division (DIN). The MP states that EDF SA will be appointed by NNB GenCo as the AE and RD for HPC with appropriate arrangements in place to ensure NNB GenCo has overall control and is an intelligent customer for those areas. At the time of carrying out this assessment, NNB GenCo had not concluded a formal agreement with EDF SA. The adequacy of the alternative arrangements put in place between NNB GenCo and the AE has been assessed in Section 4.9.1 of this report.

97 Section 2.4.2 of the MP states that NNB GenCo's Design Authority (DA) is responsible for reviewing and accepting the design of the UK EPR, control of the modifications process and the development of safety cases. The adequacy of the DA capability is assessed in Section 4.5 of this report.

98 With the exception of the above items, NNB GenCo's resourcing strategy and organisational capability is described in the NB. The NB has been assessed in the report CNRP-AR-12-098 'Licence Condition 36 Organisational Capability Compliance Arrangements' and is not considered further in this assessment.

99 My judgement is that NNB GenCo's MP, supported by the NB, sufficiently describes how NNB GenCo's organisational structure meets the nuclear safety management needs of its business. I consider the organisational capability described in the MP to be adequate for nuclear site licence granting.

#### **4.6.5 Decision Making**

100 This element expects a SMP to describe the decision making processes which should ensure that safety is given a high priority. NNB GenCo's MP describes how this expectation is met as follows:

101 Section 2.3.1 of the MP states that the NNB GenCo Board is accountable for all safety related decisions and that the Board is supported in all safety, environmental protection, security, health and quality by the Safety Director. This is intended to ensure that all decisions taken by the NNB GenCo Board are taken after full consideration of the implications of the decision.

102 Section 6.4.2 of the CM describes the role of the NNB GenCo NSC and notes that its key role is to advise the NNB GenCo Board on matters of nuclear safety to ensure that they are able to make informed decisions.

103 NNB GenCo has developed NNB-OSL-STR-000007 'Internal Challenge and Oversight Strategy' (see Annex 2) which envisages that NNB GenCo's challenge function will be applied at all levels within the organisation and will focus on a number of topic areas within the organisation, including challenging the basis of decisions made at all levels in the company. The adequacy of NNB GenCo's Independent Assessment Challenge and Oversight capability to fulfil this role is assessed in Section 4.7 of this report.

104 NNB GenCo's nuclear safety strategy envisages that NNB GenCo will develop a culture of conservative decision making. The adequacy of the nuclear safety strategy is assessed in Section 4.7 of this report.

105 My judgement is that NNB GenCo has developed decision making processes proportionate to the current stage of its organisational development which should ensure that safety is given a high priority. I consider the processes to be adequate for nuclear site licence granting.

#### **4.6.6 Management System**

106 This element expects a properly designed and implemented safety management system (SMS) to be able to deliver the aims set out by the International Nuclear Safety Group (INSAG) relating to improving the safety performance of the organisation through the planning, control and supervision of safety related activities and fostering and supporting a strong nuclear safety culture.

107 NNB GenCo has submitted NNB-OSL-MAN-000004 'Management System Manual' (MSM) with its nuclear site licence application. The MSM is part of NNB GenCo's Integrated Management System (IMS) and it describes the overarching and integrated business process framework for NNB GenCo. It establishes the structure in which the underlying processes and procedures have been developed.

108 NNB GenCo's arrangements for this element have been assessed in the report ONR-CNRP-AR-12-087 'Licence Condition 17 Management Systems Compliance Arrangements' and they are not considered further in this report.

109 ONR's assessor concluded that NNB GenCo's arrangements for compliance with Licence Condition 17 are sufficiently well advanced for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting. I support this conclusion.

#### **4.7 Nuclear Safety Advice and Challenge**

110 ONR's expectations of a licensee advisory, oversight and challenge function are set out in paragraph 72 of LNI and TAG 072. The guidance expects that the SMP should describe what arrangements exist to provide meaningful challenges to safety related decisions and activities.

111 ONR's expectations are set out in more detail in T/AST/080 'Nuclear Safety Advice and Challenge'. The guidance identifies four core features that ONR would expect to see in a licensee organisation. NNB GenCo's MP has developed arrangements to meet these expectations as described in the following sections:

##### **4.7.1 Culture**

112 This core feature expects a culture that encourages effective challenge and the seeking of advice (which contribute to a positive nuclear safety culture within the organisation).

113 Section 1 of the MP states that as part of ensuring that excellence in safety is at the forefront of what NNB GenCo does throughout the organisation it will ensure a good safety culture where challenge and learning are encouraged.

114 Section 2.3.3 of the MP states that NNB GenCo, through its Board, is responsible for establishing and overseeing an effective safety, health and environmental protection culture, specifically implementing a strong nuclear safety culture.

115 Section 2.5.3 describes the responsibilities of the Safety Director which include promotion of an effective safety culture within NNB GenCo.

116 Section 2.6.1 of the MP describes the role of the Safety, Health and Environment Committee (SHEC) in reviewing NNB GenCo's nuclear safety culture and performance, health and environmental protection policies, and monitoring and reviewing nuclear safety. The SHEC is chaired by the nuclear experienced Non-Executive Director of NNB GenCo.

117 NNB GenCo's 'Internal Challenge and Oversight Strategy' (see Annex 2 and 4.6.3 of this report) advises that it intends to develop a challenge culture as part of its strategy for developing a nuclear safety culture.

118 NNB GenCo has shared a draft of NNB-OSL-POL-000008 'Nuclear Safety Policy' with me (see Annex 2) and I have provided feedback regarding specific aspects of the policy that NNB GenCo may wish to strengthen. The policy will be signed off by the NNB GenCo Managing Director.

119 NNB GenCo developed NNB-OSL-STR-000001 'Integrated Safety Culture, Organisational Learning and Knowledge Management Development Strategy' in early 2011 (see Annex 2). I have informally monitored strategy implementation progress with NNB GenCo over the last two years. Progress was formally reviewed with NNB GenCo at a working level meeting on 19 July 2012 (see Annex 1). NNB GenCo was able to satisfactorily demonstrate progress to date, successes and next steps.

120 Successes have included high quality training in nuclear safety fundamentals via induction training and focussed training events for all NNB GenCo staff. I have attended a sample of the training events (see Annex 1) and have been very impressed with the quality of the training material and the impact that the messages delivered by the training had on event attendees.

121 NNB GenCo has carried out two nuclear safety surveys to date and the results have been used to inform decisions regarding future areas of attention within the organisation.

122 NNB GenCo has advised that it intends to replace its 'Integrated Safety Culture, Organisational Learning and Knowledge Management Development Strategy' with a single nuclear safety strategy since organisational learning and knowledge management have been considered separately. The focus of the nuclear safety strategy will be on ensuring that the organisation creates the nuclear professional culture required to make the nuclear safety policy an inherent part NNB GenCo's every day activities. The strategy is also likely to place more emphasis on nuclear construction excellence.

123 I attended a meeting of the NNB GenCo SHEC on 1 December 2011 (see Annex 1 and section 4.6.3 of this report) which was the first meeting to be chaired by NNB GenCo's nuclear experienced Non-Executive Director. Topics discussed included SHEC terms of reference (see Annex 2), safety performance, and Nuclear Safety Committee feedback. Since this was the Non-Executive Director's first meeting, it was too early for me to judge how challenging this meeting will be.

124 I have assessed NNB GenCo's Board structure in Section 4.6.3 of this report and the ONR Superintending Inspector, Organisational Capability and Nuclear Site Licensing, has attended a NNB GenCo Board meeting as an observer. I am satisfied that NNB GenCo has an appropriate number of Non-Executive Directors who can act as 'scrutineers' to support the NNB GenCo Board in identifying and assessing nuclear safety risks and help to promote a challenge culture.

125 The addition of a nuclear experienced Non-Executive Director has strengthened the nuclear safety knowledge and experience of the NNB GenCo Board and introduced a source of independent nuclear safety challenge to the Board. NNB GenCo has recently appointed a new Safety Director and I expect that this individual will be robust in challenging the NNB GenCo Board about improving standards of nuclear safety performance.

126 The adequacy of NNB GenCo's NSC has not been formally assessed in this report but I have monitored NSC development over the last three years and have attended NSC meetings as an observer (see Annex 1). I am satisfied that the NSC provides adequate advice and challenge on matters which may have nuclear safety significance. The NSC has a well-balanced, experienced membership with the external members in particular providing a robust challenge to papers submitted for NSC advice.

127 NNB GenCo Board governance processes, management systems, processes and arrangements have been assessed in Sections 4.6.3 and 4.6.6 of this report and I consider them to be adequate.

128 My judgement is that NNB GenCo has started to develop a culture that encourages effective challenge and the seeking of advice which, over time, should contribute to a positive nuclear safety culture within the organisation. I consider this approach to be sufficient for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting.

#### **4.7.2 Independent Challenge**

129 This core feature expects the provision of adequate independent challenge to, and oversight of, nuclear safety leadership, management and decision making at all levels of the organisation (including arrangements defined within the management system for challenge of key decisions) and an independent internal regulation function.

130 Section 1 of the MP advises that the Independent Assessment, Challenge and Oversight (IACO) team working for the Safety Director will provide the essential independent challenge within NNB GenCo, and communicate through the Safety Director to the NNB GenCo Board and Executive.

131 Section 2.3.3 of the MP states that the Safety Director will have in place an independent assurance function (called the IACO team) to maintain oversight of NNB GenCo's activities and will report on safety and organisational performance to the NNB GenCo Board and its supporting committees as appropriate.

132 Section 2.5.3 describes the responsibilities of the Safety Director which include provision of a strong assurance function within NNB GenCo including internal challenge and oversight.

133 NNB GenCo has developed NNB-OSL-STR-000007 'Internal Challenge and Oversight Strategy' (see Annex 2) which has been shared with ONR during its development over the last two years. The strategy specifically focuses on the two key

areas covering oversight and challenge of work practices, processes, procedures and compliance, and assessment and approval of nuclear safety submissions.

134 NNB GenCo has developed NNB-OSL-PRO-000025 'Independent Assessment' procedure (see Annex 2) which describes the arrangements used in the independent assessment of NNB GenCo operations and is an integral part of NNB GenCo's IMS.

135 NNB GenCo has developed NNB-OSL-PRG-000034 'Independent Assessment Programme 2011 – 2013' (see Annex 2) which identifies a process based approach to assessment of NNB GenCo's business activities, assessment timescales and resources. A similar programme NNB-OSL-PRG-000035 'AE Independent Assessment Programme' (see Annex 2) has been developed for assessment of the Architect Engineer's (AE) activities. I am satisfied that the programmes are adequately resourced and assessments are being undertaken in accordance with programme schedules.

136 NNB GenCo has shared independent assessment (IA) reports with ONR (see Annex 2) and ONR is satisfied with the approach being taken. Findings arising from IAs are discussed and agreed with the responsible manager at the end of the assessment and actions are tracked using NNB GenCo's organisational learning and incident management (OLIM) tool.

137 NNB GenCo's IACO team has grown steadily over the last two years and the current team strength is five (including an acting manager). Two additional resources are currently under recruitment.

138 NNB GenCo's arrangements for challenging decision making remain at an early stage of development. NNB GenCo has advised that the IACO team is beginning to attend key governance and decision making meetings to observe and challenge conduct of business but IACO attendance at these meetings needs to be integrated with NNB GenCo's governance arrangements. In particular, the key decision making meetings need to be identified and appropriate IACO team members identified to challenge the basis of decisions taken.

139 NNB GenCo's IACO team does not currently fulfil the role of an internal regulator and this is recognised as an area for future development by NNB GenCo.

140 I have engaged with NNB GenCo over the last three years as it has developed its IACO strategy and supporting arrangements. Good progress has been made with development of the IACO team and implementation of the IA assessment programmes over the last 12 months.

141 My judgement is that NNB GenCo's arrangements for independent challenge are sufficient for the current stage of NNB GenCo's organisational development and are adequate for nuclear site licence granting. However, I consider that ONR will need to engage with NNB GenCo in the post-licensing period to monitor and seek assurance on its continued development of an independent challenge capability.

#### **4.7.3 Nuclear Safety Advice**

142 This core feature expects the provision of adequate nuclear safety advice which supports effective, proportionate nuclear safety leadership, management and decision making at all levels in the organisation.

143 Section 2.3.3 of the MP notes that the NNB GenCo Board and Safety Director are supported by the SHEC and NSC supplying advice, reports, information and assurance to the Board. The adequacy of the SHEC and NSC as independent sources of advice has been assessed in Section 4.6.3 of this report.

144 Section 2.4 of the MP notes that the NNB GenCo Safety Director will attend all Board meetings to provide the MD and the Board with assurance and advice on all aspects of safety.

145 Section 2.5.3 of the MP describes the Safety Director’s responsibilities and notes that the Safety Director has responsibility for provision of safety, environment, security, health and quality advice and guidance to the NNB GenCo Board and Executive Team.

146 Section 3.5 of the NB describes the primary purpose of the NNB GenCo Safety Directorate as being to provide an independent compliance and assurance function for Safety, Environment, Security, Health and Quality to the Company. The Safety Director and his team are independent of the day to day programme delivery responsibilities and are in a position to have a clear view of the whole NNB GenCo organisation.

147 Section 3.5 of the NB advises that the Safety Directorate provides the focus for the development of policy and standards and the checking of compliance and achievement independent from the teams performing the work. It champions the NNB GenCo safety culture of nuclear professionalism, developing the culture and tools to learn from experience and drive improvements in standards. The Safety Directorate also includes organisational learning, IMS compliance, IACO and Independent Technical Assessment (ITA).

148 Section 3.5 of the NB states that the structure, roles and responsibilities have been developed taking into account the needs of the business, guidance in this area and industry practice on the role of an independent safety directorate.

149 Other aspects of the nuclear safety advice capability expected by T/AST/080 Section 5.3 are dispersed throughout the NNB GenCo organisation as follows:

<b>Nuclear Safety Advice Capability</b>	<b>Organisational Function</b>
Safety case production in line with LC14	Design Authority
Radiological health monitoring and health physics	Design Authority
Organisational baseline development and maintenance	Human Resources
Operating/overseeing the safety management system	Business Architecture
Maintaining the ‘corporate memory’ on nuclear safety	Safety Directorate
Provision of human performance/human factors advice and support	Design Authority
Maintenance of the core capability, design authority and intelligent customer capability	Design Authority

150 NNB GenCo has shared its intended Safety Directorate structure, roles and responsibilities with ONR over the last three years. The principal area of focus for ONR has been the development of NNB GenCo’s IACO function.

151 My judgement is that the NNB GenCo Board has access to nuclear safety advice through the Safety Director (supported by members of the Safety Directorate) and the nuclear experienced Non-Executive Director. I consider these arrangements to be sufficient for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting.

#### **4.7.4 Organisation, Staffing and Management**

152 This core feature expects suitable organisation structures and resources to be in place to discharge the advice and challenge functions.

153 NNB GenCo's Safety Directorate organisation, staffing and management have been discussed in Sections 4.7.2 and 4.7.3 of this report. The structure of the Safety Directorate is presented in Part B of the Nuclear Baseline and the NNB Organisation Chart dated 13 July 2012. There are a number of vacant posts on the organisation structure and I have frequently discussed progress with filling these posts with NNB GenCo. A new Safety Director was appointed in early 2012.

154 My judgement is that NNB GenCo's organisation structure and resources are sufficient to discharge the advice and challenge functions for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting.

#### **4.8 Intelligent Customer**

155 Paragraph 81 of the ONR guide 'Licensing Nuclear Installations' (Ref. 2) states that the licence applicant must be able to demonstrate sufficient knowledge of the plant design and safety case for all plant and operations on the licensed site to make sure that, when the licence is granted, the licensee will be in control of activities on its site, will understand the hazards associated with them, and will be an 'intelligent customer' for any work it commissions externally.

156 The broad principles which underpin ONR's expectations of a licensee's arrangements for the use of contractors and for retaining control of nuclear safety are set out in T/AST/049 'Licensee Use of Contractors and Intelligent Customer Capability'. NNB GenCo's MP and NB set out how it meets these principles as described in the following sections:

##### **4.8.1 Licensee Responsibility**

157 This principle expects that the licensee will retain overall responsibility for, and control of, the nuclear and radiological safety and security of all of its business, including work carried out on its behalf by contractors.

158 Section 1 of the MP states that NNB GenCo's core activities are the design, procurement, manufacturing, construction, commissioning, operation and eventual decommissioning of new nuclear plants in the UK. It gives a clear commitment that NNB GenCo will have sufficient, competent resources to be an intelligent customer and manage its activities. It notes that NNB GenCo has processes in place to control the design, assess and accept it which I have assessed in Section 4.9 of this report.

159 Section 1 of the MP advises that NNB GenCo has developed processes and an organisation to support the safe procurement of materials and services relating to the build of HPC which include demonstrating intelligent customer capability.

160 Section 5.6 of the MP states that NNB GenCo recognises the importance of being an IC for any services it procures or receives noting, in particular, the key AE and Responsible Designer (RD) relationship with EDF SA. The section describes the

approach to IC applied through the procurement procedures and the areas of the NNB GenCo business that the approach will be applied to.

161 I have engaged with NNB GenCo over the last three years to discuss the development and implementation of NNB GenCo's design review and acceptance and procurement arrangements, including management of interfaces with the AE. NNB GenCo has had considerable dialogue with the AE across this period to ensure that the AE fully understands the UK context and to confirm that NNB GenCo will have control of design and pre-construction activities. The roles and responsibilities of the respective parties have been formalised in, and enacted through, Interface Specifications (see Annex 2).

162 My judgement is that NNB GenCo's arrangements demonstrate that it has overall responsibility for, and control of, the nuclear and radiological safety and security of all of its business, including work carried out on its behalf by contractors. I consider these arrangements to be sufficient for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting.

#### **4.8.2 Sourcing of Work Policy**

163 This principle expects that licensee choices between sourcing work in-house or from contractors should be informed by a clear policy that takes due account of the nuclear safety implications of those choices.

164 NNB GenCo has developed NNB-OSL-POL-000006 'NNB GenCo Policy on Intelligent Customer' (see Annex 2). The aim of the policy is to ensure that NNB GenCo maintains control of all activities undertaken on its behalf and is an intelligent customer throughout all phases of the work, including the initial decision to contract (the 'make or buy' decision), setting the standards and selecting a competent contractor, oversight of implementation and acceptance of the work. The policy identifies eight policy implementation standards which should be reflected in all of NNB GenCo's contracts and arrangements.

165 NNB GenCo's is establishing itself as a project management organisation and it has established an organisation and arrangements to procure goods and services for the HPC project, in conjunction with the AE, using the supply chain. NNB-PCP-PRO-000061 'Create Overall Procurement Strategy and Governance Model – NNB/AE (2000 – 6000 Contracts) procedure (see Annex 2) describes the steps associated with formulating and implementing the overall procurement strategy and governance model. NNB-PCP-PRO-000063 'Sourcing and the PQQ List' procedure (see Annex 2) describes the process of sourcing suppliers for a specific contract package. The adequacy of these arrangements has been assessed in the report ONR-CNRP-AR-12-103 'NNB GenCo Workstream 10 – Nuclear Steam Supply System Procurement Compliance Arrangements' (see Annex 2).

166 The NNB GenCo IC Policy is supported by NNB-OSL-GIU-000160 'Intelligent Customer Practice and Guidance' document (see Annex 2) which provides mandatory practices and guidance in support of the IC Policy and its implementation. The document addresses implementation of the IC Policy Standards. NNB GenCo's intention is that the practical responsibilities of the IC function are embedded in the Integrated Management System (IMS) procedures and governing documents that direct nuclear safety related activities for IC related work.

167 Lack of contract activity to date has meant that the Intelligent Customer Practice and Guidance document has only been applied to a small number of contracts. I have sampled two contracts (see Annex 2) and they demonstrate a structured approach based

on lifecycle phases relating to the 'make or buy decision', defining the nuclear safety significance of the work, specifying the work, assessing and selecting the contractor, oversight of work in progress and accepting completed work. The approach includes identifying the nominated IC Lead for each lifecycle phase.

168 My judgement is that NNB GenCo's IC Policy and supporting IC Practice and Guidance document is adequate to inform choices between sourcing work in-house or from contractors, albeit at this stage of the HPC project a significant amount of work will be sourced from the supply chain. I consider these arrangements to be sufficient for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting.

#### **4.8.3 Intelligent Customer Capability**

169 This principle expects a licensee to maintain an 'intelligent customer' capability for all work carried out on its behalf by contractors that may impact on nuclear safety.

170 Section 5.6 of the MP notes the importance of NNB GenCo being an IC for any services it procures or receives. It notes that responsibility for IC rests with the Project Director HPC. The section identifies NNB GenCo's approach to IC which is applied through the procurement procedures (see Annex 2) as described in NNB-PCP-PRO-000060 'Procurement Overview-NNB/AE (2000-6000 Contracts)' procedure (see Annex 2). The requirement to identify the intelligent customer capability for a contract or work package is identified in NNB-PCP-PRO-000062 'Contract Kick-Off Meeting – NNB/AE (2000-6000 Contracts)' procedure (see Annex 2).

171 Section 1.2 of the NB describes the NNB GenCo organisation. It describes the employment model where groups of staff comprising NNB GenCo employees, seconded EDF Energy plc employees, seconded EDF SA employees and embedded contractors make up the licensee organisation. These groups of staff provide NNB GenCo's IC capability. Additional support may be called on from non-embedded contractors on a task based arrangement but these contractors are not considered as being part of the licensee organisation by NNB GenCo and will require IC oversight from within the licensee organisation.

172 NNB GenCo has shared its employment model with me during the development of its organisational capability and I consider that the model is satisfactory (see Section 4.6.4 of this report).

173 Section 1.2 of the NB identifies eight principles which have been developed by NNB GenCo as criteria that can be used to determine whether a resource should be considered to be embedded or not within the NNB GenCo organisation. Table 1 of the NB describes the employment categories applicable to individuals in the licensee organisation.

174 Section 4.2 of the NB defines IC, the scope of the IC function and attributes, and the IC capability. The IC capability is made up of individuals that have IC Practitioner (ICP) NB roles and others that have IC competence within their technical roles. IC Practitioners may also be appointed as Lead IC to coordinate IC activities and ensure due process is followed. This is intended to ensure that IC roles are in place in proportion to nuclear safety significance so that NNB GenCo remains in control of work with nuclear safety implications carried out by contractors.

175 Section 4.2 of the NB Part B identifies 62 posts as having an ICP role. In particular, the Design Authority (DA) teams have an extensive IC capability, with Manufacturing

Inspection and HPC Site Construction also having significant ICP role numbers to cover the contract lifecycle phases undertaken at present.

176 I have worked with NNB GenCo over the last three years as it has developed its IC capability and I am satisfied that the approach is soundly based and that the correct areas of 'core competence' have been identified where IC capability is required at this stage of the HPC project lifecycle. However, further work is required by NNB GenCo to fully embed its arrangements, and to demonstrate that the IC capability is sufficient and that individuals fulfilling IC roles are competent.

177 Section 5.2 of the NB references NNB GenCo's vulnerability assessment and the adequacy of the IC capability and resources has been included in this exercise. NB section 4.2.2.5 'Nuclear Baseline Justification' was assessed in report CNRP-AR-12-098 'Licence Condition 36 Organisational Capability Compliance Arrangements'. The assessment confirmed that the vulnerability assessment meets with ONR's expectations.

178 As part of ONR's licensing intervention strategy, workstream leads for control and instrumentation, electrical engineering, structural integrity, civil engineering, mechanical engineering, probabilistic safety analysis, internal hazards, external hazards, human factors and safety case production have assessed the adequacy of NNB GenCo's IC capability for their respective technical disciplines and have concluded that NNB GenCo is able to demonstrate an adequate IC capability in the context of each of these disciplines. The assessment reports for each of these disciplines are referenced in Annex 2.

179 My judgement is that NNB GenCo's approach to, and arrangements, for identifying and maintaining its IC capability is robust and meets with ONR's expectations for this pre-construction phase of the HPC project. I consider these arrangements to be sufficient for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting.

#### **4.8.4 Contractor Competence**

180 This principle expects a licensee to ensure that it only lets contracts for work with nuclear safety significance to contractors with suitable competence, safety standards and resources.

181 The adequacy of NNB GenCo's procurement arrangements has been assessed in the report CNRP-AR-12-103 'Nuclear Steam Supply System Procurement Compliance Arrangements'.

182 The assessment was carried out on the 2000-6000 series of contracts which are contracts for nuclear safety significant plant. ONR's assessor noted that at the time of the assessment only one full contract in the 2000-6000 series of contracts had been awarded associated with ground work at HPC which has no nuclear safety significance. On the basis of this limited sample, the assessor concluded that NNB GenCo's procurement arrangements, whilst still evolving, are adequate for nuclear site licensing. I support this conclusion.

#### **4.8.5 Nuclear Safety Implications of Outsourced Work**

183 This principle expects a licensee to ensure that all contractors' staff are familiar with the nuclear safety implications of their work and interact in a well coordinated manner with its staff.

184 The adequacy of NNB GenCo's procurement arrangements has been assessed in the report CNRP-AR-12-103 'Nuclear Steam Supply System Procurement Compliance Arrangements'.

185 The assessment was carried out on the 2000-6000 series of contracts which are contracts for safety significant plant. ONR's assessor noted that at the time of the assessment only one full contract in the 2000-6000 series of contracts had been awarded associated with ground work at HPC which has no nuclear safety significance. The assessor concluded that NNB GenCo's procurement arrangements, whilst still evolving, are adequate for nuclear site licensing. I support this conclusion.

#### **4.8.6 Safety and Quality**

186 This principle expects a licensee to ensure that contractors' work is carried out to the required level of safety and quality in practice.

187 The adequacy of NNB GenCo's procurement arrangements has been assessed in the report CNRP-AR-12-103 'Nuclear Steam Supply System Procurement Compliance Arrangements'.

188 The assessment was carried out on the 2000-6000 series of contracts which are contracts for safety significant plant. ONR's assessor noted that at the time of the assessment only one full contract in the 2000-6000 series of contracts has been awarded associated with ground work at HPC which has no nuclear safety significance. On the basis of this limited sample, the assessor concluded that NNB GenCo's procurement arrangements whilst still evolving are adequate for nuclear site licensing. I support this conclusion.

#### **4.9 Design Authority**

189 Paragraph 83 of the ONR guide 'Licensing Nuclear Installations' (Ref. 2) states that to ensure ongoing control of the design of the plant there needs to be a Design Authority (DA) as defined in INSAG-19 'Maintaining the Design Integrity of Nuclear Installations Throughout their Operating Life' (see Ref 14).

190 The broad principles which underpin ONR's expectations of a licensee's arrangements for a licensee's DA capability are set out in T/AST/079 'Licensee Design Authority Capability'. NNB GenCo's MP and NB set out how it meets these principles as described in the following sections:

##### **4.9.1 Design Authority Function**

191 This principle expects the DA to be a defined function within a licensee's organisation which is independent of operations and has a direct reporting line to the Board of the licensee organisation.

192 Section 5.3 of the MP advises that the DA is a defined function within the NNB GenCo organisation which reports through to the Project Director HPC, who is a member of the NNB GenCo Board.

193 The NNB GenCo Board includes an EPR Architect Director with responsibility for the design of the EPR power station model suitable for construction in the UK, development of the construction schedule of the EPR design by the Architect Engineer (AE) for transfer to the UK, and delivery of engineering and design activity being undertaken in France by EDF SA to meet UK EPR project schedule and UK specifications.

194 Section 2.4.2 of the MP notes that the Project Director HPC has executive responsibility for reviewing and accepting the design of the UK EPR, the control of the modifications process and the development of the safety case. The Project Director HPC has responsibility for the NNB GenCo DA.

195 Section 3.6 of the NB notes that the Head of Design Authority is responsible for providing adequate arrangements to fulfil the role of the DA within NNB GenCo to lead the assurance of the design. The structure of the DA function within the wider NNB GenCo organisation is substantiated within Part B of the NB.

196 Section 5.3 of the MP describes the roles and responsibilities of the DA which include reviewing and accepting the design of the UK EPR, the control of modifications process and the development of safety cases. These responsibilities have been clearly defined and documented in NNB-OSL-MAN-000001 'Design Authority Manual', NNB-OSL-PRO-000035 'Design Review and Acceptance Procedure', NNB-OSL-PRO-000033 'Procedure for the Control of Modifications During Construction and Commissioning', and NNB-OSL-PRO-000030 'Management of Safety Reports' (see Annex 2). These procedures are an integral part of the NNB GenCo Integrated Management System.

197 Section 5.3 of the MP describes the role of EDF SA as the AE and Responsible Designer (RD) and states that NNB GenCo intends to formally appoint EDF SA as the AE and RD. At the time of carrying out this assessment NNB GenCo has not made this appointment. The roles and responsibilities of the DA and AE are described in NNB-OSL-SPE-000018 'Design Review and Acceptance Interface Specification' and NNB-OSL-SPE-000019 'AE/NNB GenCo Safety Case and Design Change Management (Interface Specification)' (see Annex 2).

198 The effectiveness of the DA is monitored by the NNB GenCo Board via the NNB Monthly Performance Report (see Annex 2).

199 NNB GenCo has established the DA as a defined function within the Project Directorate. My judgement is that, although the Head of the DA reports to the Project Director HPC, the Project Director HPC is responsible to the NNB GenCo Board for reviewing and accepting the design of the UK EPR, the control of the modifications process and the development of the safety cases. I consider this arrangement to be sufficient for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting.

#### **4.9.2 Authority and Responsibility**

200 This principle expects the DA to have the authority and responsibility to approve or reject proposed design changes.

201 The design of the HPC EPR is still evolving. The DA has developed arrangements which allow it to review and accept the designs proposed by the AE. These arrangements are formalised in NNB-OSL-SPE-000018 'Design Review and Acceptance Interface Specification' (see Annex 2) which clarifies the roles and responsibilities of the AE and DA for producing, reviewing and accepting detailed designs, and NNB-OSL-PRO 'Design Review and Acceptance Procedure' which describes the process for reviewing and accepting designs. I reviewed the application of these arrangements using a sample of contracts during the Design Authority Intervention which was carried out on 27 June 2012 (see Annex 1) and concluded that they were being satisfactorily applied.

202 NNB GenCo is currently revising its MP and has shared a draft with ONR. Section 2.6.3 of the revised MP introduces a new committee, the Monitoring and Decision Meeting (MODEM) which is chaired by the Project Director. The scope of this meeting is

to ensure the establishment of the basic UK EPR design. The principal responsibilities of the MODEM in relation to the scope are:

- Reviewing the design of the site, nuclear plant and associated development infrastructure for integrity and consistency with the nuclear safety case;
- Overseeing the activities of the AE in order to retain effective control of the design;
- Overseeing the adequacy of design modification control and ensuring the correct classification of modifications according to safety significance;
- Monitoring the design work plan, setting priority and allocation of design resources;
- Addressing regulator design issues arising through the Generic Design Assessment process.

203 Construction of the EPR at HPC has not commenced. Modifications arising during construction of commissioning will be accepted or rejected by the DA using the arrangements described in NNB-OSL-PRO-000033 'Procedure for the Control of Modifications During Construction or Commissioning' (see Annex 2).

204 My judgement is that the NNB GenCo has developed arrangements which give it the authority and responsibility to approve or reject proposed designs and, in the future, proposed design changes. I consider these arrangements to be sufficient for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting.

#### **4.9.3 Design Authority Capability**

205 This principle expects the DA to have the capability to understand the totality of the design and nuclear safety case in the context of each stage of the full plant lifecycle.

206 The structure of the DA and the responsibilities of the Head of Design Authority and DA Managers are described in NNB-OSL-MAN-000001 'Design Authority Manual'. I have engaged with NNB GenCo through a series of working level meetings over the last three years to discuss the development of NNB GenCo's DA capability. These meetings were supplemented by ONR-CNRP-AR-12-096 'Licence Condition 12 – Duly Authorised and Other Suitably Qualified and Experienced Persons Compliance Arrangements' intervention (see Annex 2) which included structured discussions with a sample of DA staff. I gained confidence through the intervention that NNB GenCo's Management of Competency arrangements had been satisfactorily applied within the DA and that staff interviewed were competent to fulfil their roles.

207 As part of ONR's licensing intervention strategy, workstream leads for control and instrumentation, electrical engineering, structural integrity, civil engineering, mechanical engineering, probabilistic safety analysis, internal hazards, external hazards, human factors and safety case production have assessed the adequacy of NNB GenCo's DA capability for their respective technical disciplines and have concluded that NNB GenCo is able to demonstrate that it has sufficient suitably qualified and experienced personnel in each of each of these disciplines to manage, implement and deliver the relevant discipline aspects of the HPC programme. The assessment reports for each of these disciplines are referenced in Annex 2.

208 Section 5.5 of the MP acknowledges that knowledge management (KM) is an important part of the NNB GenCo approach to developing the organisation and states that NNB GenCo is building the knowledge to be able to be in control of design, construction, commissioning and ultimately operation.

209 Section 5.5 sets out NNB GenCo's approach to KM and advises that the approach is being applied initially in the DA.

210 I have engaged with the DA through working level meetings (see Annex 1) over the last two years to enable me to understand the DA's approach to KM and to gain confidence that it would meet the expectations set out in T/AST/079 Annex 2. At the most recent meeting on 20 April 2012 (see Annex 1), I found that NNB GenCo has a well developed KM strategy (see Annex 2) and approach to KM which should provide for knowledge to be extracted from the AE, captured and exchanged throughout the DA.

211 My judgement is that the DA has the capability to understand the totality of the design and safety case in the context of the full plant lifecycle. I consider these arrangements to be sufficient for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting.

#### **4.9.4 Plant Limits and Conditions**

212 This principle expects the DA to have the resources, capability and management processes to assess changes to the plant's conditions and limits and performance characteristics, and have the authority to recommend modification to or suspension of operations.

213 This principle is not applicable to NNB GenCo at this current pre-construction phase of the HPC project.

#### **4.9.5 Knowledge, Skills, Experience and Resources**

214 This principle expects the DA to have up to date knowledge, skills, experience and resources.

215 Section 3.6 of the NB references to role of the DA and describes its role in leading the assurance of the design. It notes that development of the DA has been a key activity since the first version of the NB and will remain so as a central part of the NNB GenCo resourcing strategy. The structure of the DA organisation is contained within Part B of the NB.

216 I have discussed DA resource management with the Head of Organisational Capability and the Head of Design Authority and I am content that it is integrated with NNB GenCo's human resource (HR) processes. Version 3.3 of the NB dated July 2012 states that DA resourcing is 87% filled and notes that there a small number of posts (4) where contract support is used. Appendix A1.2 of the NB lists the DA posts and identifies whether or not they have been filled.

217 The NB advises that 34 vacancies existed in July 2012 in the instrumentation and controls, electrical, radiological consequences, fire specialist, safety case and structural integrity disciplines. NNB GenCo HR has advised the process for filling those vacancies and I am satisfied that recruitment is being given appropriate priority.

218 As part of ONR's licensing intervention strategy, workstream leads for control and instrumentation, electrical engineering, structural integrity, civil engineering, mechanical engineering, probabilistic safety analysis internal hazards, external hazards, human factors and safety case production have assessed the adequacy of DA resources for their respective technical disciplines (see Annex 2). They have concluded that NNB GenCo is currently able to demonstrate that the number of suitably qualified and experienced personnel that it has in each of each of these disciplines is sufficient.

219 NNB GenCo has developed a training strategy supporting arrangements which ONR has assessed in the report ONR-CNRP-AR-12-097 'Licence Condition 10 Training Compliance Arrangements' (see Annex 2). The strategy and arrangements should ensure that DA staff maintain up to date knowledge, skills and experience.

220 Section 4.5 of the NB identifies the Director of Human Resources as being responsible for implementing and operating succession planning and contingency arrangements. These arrangements are currently under development by NNB GenCo HR.

221 The NB references NNB-HRE-ASS-000002 'NNB GenCo Nuclear Baseline Vulnerability Assessment' (see Annex 2) which has reviewed every post in the NNB GenCo organisation, considered potential vulnerabilities against those posts, and where appropriate, identified mitigating action. The review of the DA notes vulnerability associated with singleton roles and advises that contingency arrangements are needed to manage this situation. I regard the vulnerability assessment as comprehensive and good practice. It gives confidence that NNB GenCo understands its resource vulnerabilities.

222 Section 5.3 of the MP describes the role of the DA in the pre-construction phase of the HPC project. It notes that the DA has sufficient capability and knowledge of the reactor design, safety and environmental case for the current phase.

223 Section 3.6 of the NB notes that a key requirement of the construction phase will be the input of design information to the construction team and resolution of any emerging issues and that the DA presence on site will increase to support the site team in its role.

224 My judgement is that the DA has up to date knowledge, skills, experience and resources for the current phase of the HPC project. I consider the DA's approach to be sufficient for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting.

#### **4.9.6 Plant Design and Safety Case**

225 This principle expects the DA to regularly assess and determine the continued adequacy of the plant's design and safety case, and have the authority and responsibility to respond to the issues identified.

226 Section 6 of the CM describes the committees that the NNB GenCo Directors have put in place a number of committees to assist them in the discharge of their responsibilities. Section 6.3 advises the role of the Operational Control Committee in reviewing the design of the site, overseeing the activities of the AE, understanding all major technical areas of the UK EPR design, and overseeing the adequacy of design modification control.

227 Section 4.6.3 of this report notes the introduction of the Monitoring and Decision Meeting (MODEM), to assist the NNB GenCo Board to discharge its responsibilities. The role of the MODEM is to ensure the establishment of the basic UK EPR design. One of the key roles of the MODEM is to review the design of the site, nuclear plant and associated development infrastructure for integrity and consistency with the nuclear safety case.

228 Section 3.6 of the NB notes the design assurance role that the DA leads on behalf of NNB GenCo.

229 Section 5.3 of the MP advises that the DA has responsibility for the production and ownership of safety documentation for HPC and that production of safety documentation for HPC will be managed by the DA, supported by EDF SA. Procedure NNB-OSL-PRO-

000030 'Management of Safety Reports' (see Annex 2) describes defines the activities for managing safety reports (PCSR, PCmSR, POSR and SSR) including their production review and approval in order to justify safety during design, procurement, construction, manufacture, commissioning, operation and decommissioning. The adequacy of these arrangements has been assessed in the report ONR-CNRP-AR-12-0083 'Safety Case Production' (see Annex 2).

230 My judgement is that the DA has put in place arrangements to regularly assess and determine the continued adequacy of the plant's design and safety case, and it has the authority and responsibility to respond to the issues identified. I consider these arrangements to be sufficient for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting.

#### **4.9.7 Responsible Designers**

231 This principle expects that where the licensee does not have all the detailed, specialised knowledge required of all the systems and components important to safety, it may choose to assign those responsibilities to 'Responsible Designers' using the supply chain.

232 Section 1 of the MP states that NNB GenCo will be the nuclear site licensee for HPC and Sizewell C and will be supported by Electricité de France SA (EDF SA) including EDF's nuclear engineering division (Division Ingénierie Nucléaire or DIN) as Responsible Designer (RD) and Architect Engineer (AE) since it has the specialist knowledge of the UK EPR design.

233 Section 2.2 of the MP advises that EDF SA will be appointed by NNB GenCo as the AE and RD for HPC with appropriate arrangements in place to ensure NNB GenCo has overall control and is an IC for those areas. It notes that both appointments may be covered by a single agreement up to the point where the AE role ceases (following initial operation), and a specific RD agreement will be put in place.

234 Section 2.2.1 of the MP describes the role of the AE as being to manage the production of the design, to manage the early stages of the procurement process, development of the construction schedule and management of the interfaces.

235 Section 2.2.2 of the MP describes the role of the RD as being to hold the detailed knowledge of the design, maintain the codes and standards, contribute to the design process at the upper levels and to ensure the validity of the detailed design at the lower levels. The scope of the RD is for the plant and equipment within the nuclear site licence boundary, apart from those aspects which will be covered by NNB GenCo Engineering (includes roads, networks and the operational services centre).

236 At the time of preparing this assessment, NNB GenCo has not put a formal agreement in place covering the AE and RD roles and it has not been possible to assess how NNB GenCo will ensure that the AE and RD will maintain their specialised knowledge of design, their competence in the detailed design process and ensure adequate security of, and accessibility to, knowledge and support.

237 In the absence of a formal agreement NNB GenCo has put Interface Specifications in place with the AE covering safety case and design change management, non-conformance management, design review and acceptance, contractor document control and workflow, design evolution management, breakdown of design responsibilities between NNB and AE, and management of technical interfaces for design (see Annex 2). NNB GenCo has shared these Interface Specifications with me and I consider them to be adequate.

238 My judgement is that the interface specifications that NNB GenCo has put in place between the DA and AE/RD should give it access to the detailed, specialised knowledge required of all the systems and components important to safety until a formal agreement is put in place between NNB GenCo and EDF SA. I consider this arrangement to be sufficient for the current stage of NNB GenCo's organisational development and adequate for nuclear site licence granting.

#### **4.10 Comparison with Standards, Guidance and Relevant Good Practice**

239 NNB GenCo's organisational capability has been assessed against the requirements of the standards and associated guidance identified in sections 2.1, 2.2, 2.3 and 2.4 of this report. Technical Assessment Guides T/AST/049, T/AST/072, T/AST/079 and T/AST/080 set out ONR's expectations of a licensee's organisational capability and NNB GenCo's arrangements have been assessed against these expectations.

240 NNB GenCo's organisational capability arrangements are clearly defined and documented. In my opinion they meet ONR's requirements and expectations as set out in the ONR guide 'Licensing Nuclear Installations' paragraphs 65 to 69, 72 to 83 and 98, SAPS MS.1 to MS.4 and T/AST/049, T/AST/072, T/AST/079 and T/AST/080.

## 5 CONCLUSIONS AND RECOMENDATIONS

### 5.1 Conclusions

#### Summary Remarks

241 NNB Generation Company Ltd (NNB GenCo) has applied for a nuclear site licence to install and operate a twin EPR nuclear power reactor at Hinkley Point C in Somerset. As part of ONR's assessment of this application, a review of the prospective licensee's organisational capability has been conducted in accordance with the requirements set out in the ONR guide 'Licensing Nuclear Installations' paragraphs 65 to 69, 72 to 83 and 98.

242 This report presents the findings of my assessment of NNB GenCo's organisational capability which is documented in the Management Prospectus, Company Manual, Nuclear Baseline and supporting arrangements, the level of implementation up to the end of July 2012, and future development needs. The assessment has been based on the requirements of ONR Safety Assessment Principles MS.1 to MS.4, Technical Assessment Guides T/AST/049, T/AST/072, T/AST/079 and T/AST/080.

243 The assessment considers the adequacy of NNB GenCo's organisational capability for the stage of development that NNB GenCo has reached at this point. It is recognised that the organisational capability will continue to evolve as the project proceeds, and continuing interaction with NNB GenCo is anticipated to gain assurance that it remains fit for purpose and that the supporting arrangements are being implemented effectively.

244 The key elements of NNB GenCo's organisational capability that I have assessed have been NNB GenCo's organisation status, leadership and duties of directors, relationship between NNB GenCo and parent companies, organisational capability, intelligent customer and design authority arrangements. NNB GenCo was able to demonstrate that its arrangements for compliance with the requirements set out in ONR guide 'Licensing Nuclear Installations' have the essential elements of a process for demonstrating that NNB GenCo:

- Has suitable and sufficient organisational structures, resources and competencies to lead and manage for safety effectively in accordance with the expectations set out in Safety Assessment Principle MS.1 to MS.4 on "Leadership and management for safety" and the suite of supporting assessment guides set out on the ONR website.
- Has nuclear safety governance arrangements which should ensure safety in the context of NNB GenCo's activities and the nuclear hazards to which they give rise.
- Is fully in control of activities on its site; understands the nuclear safety implications of its activities and how to control them; and is an intelligent customer for any work it commissions externally.

245 The ongoing dialogue with NNB GenCo organisational capability workstream leads over the last three years has yielded positive benefits in terms of the approach adopted by NNB GenCo and the design of the arrangements.

246 The HPC project is in its early phases and NNB GenCo's organisational capability is still being refined and developed. The organisation is still developing but NNB GenCo has made significant progress and has established a sound organisational capability. It was clear from the enthusiasm and attitudes of staff involved in the working level meetings over the last three years, the Design Authority intervention, and discussions with NNB GenCo Board members and shareholder representatives that there is an ongoing forward momentum within NNB GenCo to continue with the positive development of its organisational capability.

247 The HPC project lifecycle has a number of key phases such as design, construction, commissioning, operation, shutdown and decommissioning. NNB GenCo's organisational capability will need to be robust and flexible enough to cope with the changes to organisational structures, capability and resourcing requirements during each of these phases. During the design, construction and commissioning phases, NNB GenCo will need sufficient, competent staff to act as an 'intelligent customer' for the products and services it commissions and receives from its supply chain. The focus will shift during commissioning and into operations into a requirement for competent operational staff. ONR will continue to monitor the development of NNB GenCo's organisational capability arrangements as the project progresses.

### **IIS Rating LC36 Organisational Capability**

248 NNB GenCo has made significant progress over the past three years which has been reflected in the working level meetings, supported by the Design Authority intervention in May 2012, and discussions with NNB GenCo Board members and shareholder representatives in April 2012. In recognition of the success that has been achieved and the strong positive forward momentum I have allocated an **IIS rating of 3 (adequate)**.

### **Concluding Remarks**

249 NNB GenCo has made significant progress with the development and implementation of its organisational capability over the last three years. It has designed, documented and substantially implemented adequate arrangements for this stage of the HPC project. There is recognition of the need to review and develop the organisational capability as the project progresses. This requirement will increase as the project moves through its phases.

250 I have identified a number of areas where I will expect to monitor progress with development and implementation of NNB GenCo's organisational capability and associated arrangements post nuclear site licence granting and these will form part of ONR's post-licensing strategy. NNB GenCo is committed to acting on these together with its commitment to taking into account lessons learned from its own Self Assessment and Independent Assessment Challenge and Oversight assessment.

251 The granting of a site licence will enhance rather than diminish ONR's ability to influence future progress with development of NNB GenCo's organisational capability. My judgement is that the arrangements described in the Management Prospectus, Company Manual and Nuclear Baseline are adequate for this stage of the project and will provide a sound platform for development as the project proceeds.

252 To conclude, I am broadly satisfied that NNB GenCo's organisational capability addresses the requirements set out in ONR guide 'Licensing Nuclear Installations' and the expectations of Safety Assessment Principles, Technical Assessment Guides and other relevant standards. NNB GenCo's organisational capability, associated arrangements and their implementation are still evolving but outstanding issues have been recognised by NNB GenCo and there is a strong forward momentum within the company to carry this development forward. This gives me confidence that NNB GenCo's organisational capability is sufficiently far advanced for this stage of the project.

## **5.2 Recommendations**

253 My recommendations are as follows.

- NNB GenCo's organisational capability should be considered adequate to support a decision by ONR to grant a nuclear site licence for Hinkley Point C.

- ONR should continue to monitor and influence the continued development of NNB GenCo's organisational capability and associated arrangements.

## 6 REFERENCES

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- 2 Licensing Nuclear Installations  
<http://www.hse.gov.uk/nuclear/licensing-nuclear-installations.pdf>
- 3 *Safety Assessment Principles for Nuclear Facilities.* 2006 Edition Revision 1. HSE. January 2008. [www.hse.gov.uk/nuclear/SAP/SAP2006.pdf](http://www.hse.gov.uk/nuclear/SAP/SAP2006.pdf).
- 4 T/AST/049 Licensee Use of contractors and Intelligent Customer Capability.  
[http://www.hse.gov.uk/nuclear/operational/tech\\_asst\\_guides/operational/tech\\_asst\\_guides/index.htm](http://www.hse.gov.uk/nuclear/operational/tech_asst_guides/operational/tech_asst_guides/index.htm)
- 5 T/AST/065 Function and Content of the Nuclear Baseline  
[http://www.hse.gov.uk/nuclear/operational/tech\\_asst\\_guides/operational/tech\\_asst\\_guides/index.htm](http://www.hse.gov.uk/nuclear/operational/tech_asst_guides/operational/tech_asst_guides/index.htm)
- 6 T/AST/072 Function and Content of a Safety Management Prospectus  
[http://www.hse.gov.uk/nuclear/operational/tech\\_asst\\_guides/operational/tech\\_asst\\_guides/index.htm](http://www.hse.gov.uk/nuclear/operational/tech_asst_guides/operational/tech_asst_guides/index.htm)
- 7 T/AST/079 Licensee Design Authority Capability  
[http://www.hse.gov.uk/nuclear/operational/tech\\_asst\\_guides/operational/tech\\_asst\\_guides/index.htm](http://www.hse.gov.uk/nuclear/operational/tech_asst_guides/operational/tech_asst_guides/index.htm)
- 8 T/AST/080 Nuclear Safety Advice and Challenge  
[http://www.hse.gov.uk/nuclear/operational/tech\\_asst\\_guides/operational/tech\\_asst\\_guides/index.htm](http://www.hse.gov.uk/nuclear/operational/tech_asst_guides/operational/tech_asst_guides/index.htm)
- 9 IAEA Safety Standard. The Management System for Facilities and Activities Safety Requirements GS-R-3, July 2006. [International Atomic Energy Agency \(IAEA\)](http://www.iaea.org)
- 10 IAEA Fundamental Safety Principles. [International Atomic Energy Agency \(IAEA\)](http://www.iaea.org)
- 11 IAEA Safety Guide NS-G-2.4. The Operating Organisation for Nuclear Power Plants. [International Atomic Energy Agency \(IAEA\)](http://www.iaea.org)
- 12 Western European Nuclear Regulators' Association. Reactor Harmonization Group. WENRA Reactor Reference Safety Levels. WENRA. January 2008. [www.wenra.org](http://www.wenra.org).
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- 16 NNB GenCo Ltd's Application for a Nuclear Site Licence to Install and Operate two EPR Units at Hinkley Point, ONR Intervention Strategy. TRIM 2012/61973.
- 17 Application for a Nuclear Site Licence for Hinkley Point. ONR-HPC-20143R. NNB GenCo. July 2011. TRIM 2011/503357.
- 18 NNB GenCo Nuclear Site Licence Application Dossier. NNB GenCo. July 2011.

**Table 1**

Relevant Safety Assessment Principles Considered During the Assessment

SAP No.	SAP Title	Description
MS.1	Leadership	This identifies the need for oversight of nuclear safety performance and notes the key role played by the Board and leadership team.
MS.2	Capable Organisation	This makes reference to an organisation needing adequate human resources, the organisation structure and baseline staffing levels being based on appropriate organisational design principles, and changes to the organisation needing systematic evaluation to ensure that they do not adversely affect nuclear safety management capabilities
MS.3	Decision Making	This identifies the need for decision making to be based on processes that ensure the conflict between nuclear safety and other business goals, including commercial and schedule pressures and external influences, are recognised and resolved.
MS.4	Learning Organisation	This identifies that lessons should be learned from internal and external sources to continually improve leadership, organisational capability, safety decision making and safety performance.

## Annex 1

## Level 4 meetings and interventions to discuss organisational capability

Date	Location	Topic	TRIM Ref.
21/07/09	Bootle	Organisational Development	2009/301081
26/10/09	Bootle	Organisational Development	2009/460343
19/01/10	London	Organisational Development	2010/22674
21/04/10	London	Organisational Development	2010/311214
21/05/10	London	Design Authority and Intelligent Customer	2010/336913
14/07/10	London	Organisational Development	2010/328852
14/07/10	London	Governance and Risk Management	2010/318234
25/08/10	London	Human Resources and Communication	2010/444271
25/08/10	London	Design Authority and Intelligent Customer	2010/482344
07/09/10	London	Management Prospectus	2010/418792
21/09/10	London	Management Prospectus and Nuclear Baseline	2010/533679
27/09/12	London	Governance and Risk Management	2010/513928
27/10/10	London	Management Prospectus and Nuclear Baseline	2010/567877
28/10/12	London	Company Manual	2010/587345
16/11/10	London	Governance Arrangements	2010/613107
16/11/10	London	Nuclear Safety Culture	2010/15794
01/12/10	London	Design Authority and Intelligent Customer	2011/24239
02/12/10	London	Management Prospectus and Nuclear Baseline	2010/637613
02/12/10	London	Internal Challenge and Oversight	2011/17603
17/01/11	London	Governance and Risk Management	2011/116004
20/01/11	London	Design Authority	2011/101021
09/02/11	London	Internal Challenge and Oversight	2011/148429
16/02/11	Bootle	Management Prospectus and Nuclear Baseline	2011/145211
28/02/11	London	Governance and Risk Management	2011/149965
16/03/11	London	Management of Change Workshop	2011/217833
18/03/11	Bootle	Design Authority	2011/311486
30/03/11	Barnwood	Intelligent Customer	2011/271861
06/04/11	Bootle	Management Prospectus and Nuclear Baseline	2011/272041
14/04/11	London	Independent Assessment Challenge and Oversight (IACO)	2011/301176
06/05/11	London	Governance and Risk Management	2011/359339

Date	Location	Topic	TRIM Ref.
08/06/11	London	Management Prospectus and Nuclear Baseline	2011/371866
25/07/11	London	Design Authority	2011/435428
17/08/11	London	IACO	2011/467104
03/10/11	London	Design Authority	2011/537338
05/10/11	Barnwood	Intelligent Customer	2011/543128
13/10/11	London	Management Prospectus Nuclear Baseline	2011/602234
19/10/11	London	Nuclear Safety Culture	-
16/02/11	Bootle	Nuclear Baseline	2011/145211
06/04/11	Bootle	Nuclear Baseline	2011/272041
08/04/11	Barnwood	Knowledge Management	2011/264717
06/05/11	London	Governance and Risk Management	2011/359339
08/06/11	London	Nuclear Baseline	2011/371866
13/10/11	London	Nuclear Baseline	2011/602234
01/11/11	London	Governance and IACO	2011/602424
01/12/11	London	SHEC	2012/
20/01/12	Hinkley Point C	Hinkley Point C Site Organisation	2012/162846
15/02/12	Barnwood	Governance and IACO	2012/109745
24/02/12	London	Design Authority	2012/114000
28/02/12	London	Organisational Capability	2012/114476
14/03/12	Barnwood	Intelligent Customer	2012/163422
20/04/12	Bootle	Knowledge Management	2012/225230
24 - 26/04/12	London	Nuclear Safety Governance – discussions with NNB GenCo Board members	2012/296551
01/06/12	Barnwood	Organisational Capability	2012/346492
22/06/12	London	Governance and IACO	2012/280951
27/06/12	London	Design Authority Intervention	2012/296589
29/06/12	Barnwood	LC36 Compliance Thread	2012/311509
19/07/12	London	Nuclear Safety Culture	2012/315996
08/08/12	Barnwood	Intelligent Customer	2012/321625

**Annex 2**

Documents considered

Title	Document Number	TRIM Reference
NNB GenCo Ltd Nuclear Baseline	NNB-HRE-ASS-000001	
NNB GenCo Ltd Management Prospectus	NNB-OSL-REP-000054	
NNB GenCo Ltd Company Manual	NNB-OSL-MAN-000002	
NNB GenCo Limited Memorandum of Association	NNB-FIN-POL-000004	
NNB GenCo Limited Articles of Association	NNB-FIN-POL-000005	
NNB GenCo Organisation Chart 13 July 2012		2012/282590
NNB GenCo Ltd Management System Manual	NNB-OSL-MAN-000004	
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]		[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

Title	Document Number	TRIM Reference
NNB GenCo Licence Condition 36 – Organisational Capability Arrangements	ONR-CNRP-AR-12-098	
NNB GenCo Licence Condition 17 Management Systems Compliance Arrangements	ONR-CNRP-AR-12-087	
Integrated Safety Culture, Organisational Learning and Knowledge Management Development Strategy	NNB-OSL-STR-000001	
Nuclear Safety Policy	NNB-OSL-POL-000008	
NNB GenCo Policy on Intelligent Customer	NNB-OSL-POL-000006	2012/161274
NNB GenCo Intelligent Customer Practice and Guidance	NNB-OSL-GUI-000160	2012/161316
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
Create Overall Procurement Strategy and Governance Model – NNB/AE (2000-6000 Contracts)	NNB-PCP-PRO-000061	
Sourcing and the PQQ List	NNB-PCP-PRO-000063	
Procurement Overview – NNB/AE (2000-6000 Contracts)	NNB-PCP-PRO-000060	
Contract Kick-Off Meeting – NNB/AE (2000-6000 Contracts)	NNB-PCP-PRO-000062	
Design Authority Manual	NNB-OSL-MAN-000001	
Design Review and Acceptance Interface Specification	NNB-OSL-SPE-000018	
Design Review and Acceptance Procedure	NNB-OSL-PRO-000035	
AE/NNB GenCo Safety Case and Design Change Management (Interface Specification)	NNB-OSL-SPE-000019	
Procedure for Control of Modifications During Construction and Commissioning	NNB-OSL-PRO-000033	
Management of Safety Reports	NNB-OSL-PRO-000030	
Licence Condition 12 – Duly Authorised and Other Suitable Qualified and Experienced Persons Compliance Arrangements	ONR-CNRP-AR-12-096	
Control and Instrumentation (C&I) Workstream Assessment to Inform Nuclear site Licensing of NNB GenCo Hinkley Point C	ONR-CNRP-AR-12-092	

Title	Document Number	TRIM Reference
Hinkley Point C Nuclear Site Licensing – Mechanical Engineering Topic Report	ONR-CNRP-AR-12-075	
Electrical Engineering Assessment NNB GenCo Hinkley Point C licensing	ONR-CNRP-AR-12-085	
Hinkley Point C Nuclear Site Licensing – Structural Integrity Topic Report	ONR-CNRP-AR-12-065	
Civil Engineering Workstream- Nuclear Site Licensing of Hinkley Point C	ONR-CNRP-AR-12-088	
Probabilistic Safety Analysis (PSA) Workstream Assessment to Inform Nuclear Site Licensing of Hinkley Point C	ONR-CNRP-AR-12-056	
External Hazards Assessment to Inform Nuclear Site Licensing of Hinkley Point C	ONR-CNRP-AR-12-107	
Internal Hazards Workstream assessment to Inform the Nuclear site Licensing of Two EPR reactor Units at Hinkley Point C	ONR-CNRP-AR-12-082	
Safety Case Production	ONR-CNRP-AR-12-083	
Knowledge Management in the DA		2012/220966
[REDACTED]	[REDACTED]	
Management of Safety Reports	NNB-OSL-PRO-000030	
Safety Case Design and Change Management	NNB-OSL-SPE-000019	
Non-Conformance Management	NNB-OSL-SPE-000013	
Design Review and Acceptance	NNB-OSL-SPE-000018	
Contractor Document Control and Workflow	NNB-OSL-SPE-000002	
Design Evolution Management	NNB-OSL-SPE-000009	
Breakdown of Design Responsibilities Between NNB and AE	NNB-OSL-SPE-000009	
Management of Technical Interfaces for Design	NNB-OSL-SPE-000019	
NNB GenCo Nuclear Safety Policy (draft)	NNB-OSL-POL-000008	2012/312981
Integrated Safety Culture, Organisational Learning and Knowledge Management Development Strategy	NNB-OSL-STR-000001	2012/105897
Nuclear Safety Progress Update for ONR		2012/313011
Internal Challenge and Oversight Strategy	NNB-OSL-STR-000007	

Title	Document Number	TRIM Reference
Independent Assessment Procedure	NNB-OSL-PRO-000025	
IACO NNB GenCo Independent Assessment Programme 2011-2013	NNB-OSL-PRG-000034	
IACO AE Independent Assessment Programme	NNB-OSL-PRG-000035	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	