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Office for Nuclear Regulation

An agency of HSE

Civil Nuclear Reactor Programme

**NNB GenCo Licence Condition 12 - Duly Authorised and Other Suitably Qualified
and Experienced Persons Compliance Arrangements**

Assessment Report: ONR-CNRP-AR-12-096

Revision 1

21 January 2013

NOT PROTECTIVELY MARKED

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 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 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 arrangements for compliance with the conditions to be attached to a nuclear site licence 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 by applying Safety Assessment Principles MS1 to MS4 on "leadership and management for safety" and the suite of documents set out on the ONR website. The licensee will also need to demonstrate that its management system and arrangements for complying with the site licence conditions are adequate and that they are being implemented effectively before the licence is granted'*.

This 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 in Somerset. It considers the adequacy of NNB GenCo's arrangements to meet the requirements of Licence Condition 12 'Duly Authorised and Other Suitably Qualified and Experienced Persons', and their implementation for the stage of development that NNB GenCo has reached at this pre-construction stage of the Hinkley Point C project. It is recognised that the arrangements 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. NNB GenCo has concluded its own Self Assessment and Independent Assessment Challenge and Oversight assessment of the Licence Condition 12 arrangements and the findings from these assessments have informed ONR's assessment.

Assessment and inspection work carried out by ONR

This assessment has been informed by a number of working level meetings over a two year period plus discussions with NNB GenCo staff as part of a targeted intervention which took place in May 2012. The working level meetings provided a forum for dialogue, for influencing the development of NNB GenCo's Licence Condition 12 compliance arrangements, and for monitoring progress with implementation of the arrangements.

The intervention comprised structured discussions with a representative sample of staff undertaking nuclear safety significant roles from various parts of NNB GenCo's organisation, with particular emphasis on the Design Authority. The discussions related to application of the competency assessment arrangements and the line manager's role in ensuring that they were comprehensively and consistently applied.

NNB GenCo was able to demonstrate during the working level meetings and the intervention that its arrangements for compliance with Licence Condition 12 have the essential elements for demonstrating staff competence as defined in IAEA Safety Standard GS-R-3, and ONR Technical Assessment Guide T/AST/027. Arrangements for the appointment of Duly Authorised Persons are not required at this stage of the HPC project and will only be required when nuclear material is introduced to the site. The ongoing dialogue ONR and NNB GenCo have had in support of this workstream over the last two years has yielded positive benefits in terms of the approach adopted by NNB GenCo and the design of the arrangements.

As part of ONR's licensing intervention strategy, ONR workstream leads for technical disciplines have assessed the application of the training arrangements in their respective disciplines. This assessment report has taken into account their views of the adequacy of NNB GenCo's competence arrangements.

The Hinkley Point C project is in its early phases and the arrangements are still being refined and developed. NNB GenCo has made significant progress and has established the key attributes of arrangements to demonstrate the competence of staff undertaking nuclear safety related roles. It was clear from the attitudes of staff involved during the intervention in May 2012 and the evidence of senior management support that there is an ongoing forward momentum within the company to continue with positive development of the arrangements.

The Hinkley Point C project lifecycle has a number of key phases such as design, construction, commissioning, operation, shutdown and decommissioning. The Licence Condition 12 compliance arrangements will need to be robust and flexible enough to cope with staff competency requirements during in each of these phases. NNB GenCo understands and recognises this and will review and update its arrangements as appropriate as the project progresses. 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 to a requirement for competent operational staff. ONR will continue to monitor the development of these arrangements as the project progresses.

Matters arising from ONR's work

NNB GenCo's arrangements are still evolving and implementation is at an early stage. At the time of the intervention, a significant proportion of NNB GenCo's nuclear safety significant roles had been subject to competence assessment. Slight differences in interpretation of the competence assessment arrangements were observed between NNB GenCo's functional areas and some degree of normalisation will be required to ensure consistency. ONR will need to monitor completion of the competency exercise and the ongoing development and implementation of the arrangements.

Conclusions

This report presents the findings of ONR's assessment of NNB GenCo's compliance arrangements for Licence Condition 12 'Duly Authorised and Other Suitably Qualified and Experienced Persons'.

I am satisfied that that NNB GenCo's compliance arrangements for Licence Condition 12 have adequately addressed the expectations of relevant standards. The arrangements and implementation are still evolving, but outstanding issues have been recognised and understood by NNB GenCo and there is a strong forward momentum within the company to carry this development forward. This gives me confidence they are sufficiently well advanced for this stage of the project.

Recommendations

My recommendations are as follows:

- 1 NNB GenCo's arrangements for compliance with Licence Condition 12, and the implementation of these arrangements, should be considered adequate to support a decision by ONR to grant a nuclear site licence for Hinkley Point C.
- 2 ONR should continue to monitor and influence the development of NNB GenCo's competence arrangements.

LIST OF ABBREVIATIONS

| | |
|------|--|
| BMS | Business Management System |
| HPC | Hinkley Point C |
| HR | Human Resources |
| HSE | Health and Safety Executive |
| IACO | Independent assessment Challenge and Oversight |
| IAEA | International Atomic Energy Agency |
| IR | Intervention Report |
| LC | Licence Condition |
| NB | Nuclear Baseline |
| ONR | Office for Nuclear Regulation (an agency of HSE) |
| PAR | Project Assessment Report |
| SA | Self Assessment |
| SAP | Safety Assessment Principle(s) (HSE) |
| SME | Subject Matter Expert |
| SQEP | Suitably Qualified and Experienced (persons) |
| TAG | Technical Assessment Guide(s) (ONR) |

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Annex 1: Working level meetings and interventions to discuss LC12 compliance arrangements.

Annex 2: Documents considered

1 INTRODUCTION

1.1 Background

3 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 arrangements for compliance with the conditions to be attached to the nuclear site licence has been conducted.

4 This report presents the findings of the assessment of NNB GenCo's compliance arrangements for Licence Condition (LC) 12 'Duly Authorised and Other Suitably Qualified and Experienced Persons'. Relevant documentation was provided by NNB GenCo to support the intervention undertaken in May 2012. Assessment was undertaken in accordance with the requirements of the Office for Nuclear Regulation (ONR) procedure AST/003 (Ref. 1). The ONR Safety Assessment Principles (SAPs) (Ref. 2), together with supporting Technical Assessment Guides (TAGs) (Ref. 3), have been used as the basis for this assessment.

1.2 Scope

5 The scope of this report covers the adequacy of NNB GenCo's arrangements for the 'management of competency' in compliance with the requirements of LC 12 'Duly Authorised and Other Suitably Qualified and Experienced Persons', prior to drafting of ONR's Project Assessment Report (PAR) for licensing. Arrangements for appointment of Duly Authorised Persons are not required at this stage of the HPC project and are outside the scope of this assessment.

6 The assessment has been undertaken before NNB GenCo's competence management arrangements are fully developed but at a point when sufficient progress has been made to be able to assess their adequacy for this stage of the project. This assessment has been undertaken following a Self Assessment (SA) and an Independent Assessment Challenge and Oversight (IACO) assessment of the LC12 arrangements by NNB GenCo.

1.3 Methodology

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

8 This assessment has focussed on the arrangements for compliance with the requirement to ensure that only suitably qualified and experienced persons perform any duties which may affect the safety of operations on site in compliance with LC 12. The assessment considers the process and documented procedures for the management of competence.

2 ASSESSMENT STRATEGY

9 The intended assessment strategy for NNB GenCo's arrangements for complying with LC 12 is set out in this section. It identifies the scope of the assessment and the standards and criteria that have been applied.

10 ONR and NNB GenCo have been engaged in a series of working level meetings to discuss the arrangements NNB GenCo has been developing to comply with the requirements of LC 12. NNB GenCo's Head of Training, reporting to the Pre-Operations Director, has been the NNB GenCo workstream lead.

11 ONR has used the working level meetings to advise, guide and monitor progress with development and implementation of management of competence arrangements for nuclear baseline roles by NNB GenCo. These meetings were supplemented by structured discussions with a sample of staff undertaken as part of an ONR intervention to assess the effectiveness of implementation of NNB GenCo's arrangements for LC 12 as part of the licensing process. The reports of the working level meetings and the intervention are listed in Annex 1.

2.1 Standards and Criteria

12 The relevant standards and criteria adopted within this assessment are principally the Safety Assessment Principles (SAPs) (Ref. 2), internal ONR Technical Assessment Guides (TAGs) (Ref. 3), relevant national and international standards and relevant good practice informed by existing practices adopted on 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 Safety Assessment Principles

13 The key SAPs MS.2 Capable Organisation and EHF.8 Personnel Competence applied within the assessment are included within Table 1 of this report. SAP MS.2 refers to an organisation needing adequate human resources having the necessary competences to manage nuclear safety. SAP EHF.8 expects a systematic approach to the identification and delivery of personnel competence to be applied.

2.2.1 Technical Assessment Guides

14 The following Technical Assessment Guide has been used as part of this assessment (Ref. 3):

- T/AST/027 – Issue 3 'Training and Assuring Personnel Competence'.

2.2.2 National and International Standards and Guidance

15 The following international safety standard has been used as part of this assessment (Ref. 4):

- IAEA GS-R-3 'The Management System for Facilities and Activities'.

16 The Technical Assessment Guide T/AST/027 incorporates the key aspects of GS-R-3.

2.3 Use of Technical Support Contractors

17 No supporting contractors were used.

2.4 Integration with other Assessment Topics

- 18 It is essential that personnel whose activities have the potential to impact on nuclear safety are suitably qualified and experienced (SQEP) to carry out their jobs. NNB GenCo must have arrangements in place to define and deliver training needed to sustain competence and to meet the requirements of Licence Condition 10 'Training'. NNB GenCo's arrangements for LC 10 have been assessed in conjunction with its arrangements for LC 12 (see assessment report ONR-CNRP-AR-12-095 'NNB GenCo Licence Condition 10 – Training Compliance Arrangements').
- 19 The competence assessment exercise has focussed on roles identified in the nuclear baseline which have the potential to have an adverse effect on nuclear safety if incorrectly carried out. The LC 12 workstream is closely aligned with the work being carried out in the nuclear baseline workstream 14. The report ONR-CNRP-AR-12-100 'NNB GenCo Organisational Capability Arrangements – workstreams 12 to 15' describes ONR's assessment of NNB GenCo's nuclear baseline (see Annex 2).
- 20 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 staff competence in relation to their particular technical disciplines as recorded in their individual assessment reports (see Annex 2). This assessment report has drawn on the outputs of a sample of these reports which confirm that the competence assessment process has been correctly applied to the individual technical disciplines.

2.5 Out-of-scope Items

- 21 Arrangements for the appointment of 'Duly Authorised Persons' are not required at this stage of the HPC project and are outside the scope of this assessment.

3 LICENSEE'S SAFETY CASE

22 NNB GenCo has not provided its compliance arrangements for LC 12 'Duly Authorised and Other Suitably Qualified and Experienced Persons' as a formal safety case; rather they have been presented as a suite of documentation to support the working level meetings and the intervention in May 2012. The intervention has formed the basis for the overall assessment of the adequacy of NNB GenCo's competence arrangements. The documentation considered during this assessment is identified in Annex 2.

4 ONR ASSESSMENT

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

4.1 Scope of Assessment Undertaken

24 The aim of my assessment was to gain assurance that NNB GenCo's arrangements for ensuring only suitably qualified and experienced persons perform any duties which may affect the safety of operations on the HPC site are adequate for this stage of the project, and that the arrangements will continue to develop as the project progresses.

25 I have engaged with NNB GenCo through a series of working level meetings (see Annex 1) to discuss the development and adequacy of NNB GenCo's proposals based on the requirements and guidance identified in section 2.1 of this report.

4.2 Assessment

26 The assessment began with a series of working level meetings held over a two year period. These were undertaken to guide and monitor progress with development of the management of competence arrangements for nuclear baseline roles. This gave confidence in the robustness of the arrangements and their compatibility with ONR's expectations as set out in T/AST/027 'Training and Assuring Personnel competence'.

27 Following on from the working level meetings, I undertook an intervention to assess the implementation of the arrangements in practice. I was supported in this by an ONR Human Factors Specialist and the intervention was undertaken on 15, 16, 17, 18 and 28 May 2012. This intervention has formed the basis of this assessment.

28 The intervention provided NNB GenCo with an opportunity to demonstrate implementation of its compliance arrangements for 'management of competency' under LC 12 at this stage of the project. The Intervention Report (IR) ONR-NNB GenCo-IR-12-138 (TRIM Ref. 2012/263681) (see Annex 1) provides a detailed account of ONR's discussions with a sample of NNB staff holding nuclear baseline i.e. nuclear safety significant roles, to gain an understanding of the effectiveness of the implementation of the arrangements.

29 The assessment focussed on application of NNB's 'management of competency' arrangements at a process level rather than at an individual level, and the line manager's role in ensuring that they are comprehensively and consistently applied.

30 We held structured discussions with a representative sample of NNB GenCo staff undertaking nuclear safety significant roles drawn from various parts of the NNB GenCo organisation, with particular emphasis on the Design Authority which has the majority of Nuclear Baseline (NB) roles at the current stage of the HPC project. Line managers and senior managers were included in the exercise and the sample encompassed NNB GenCo staff based at the Qube, Barnwood and HPC sites. A standard question set was used with questions tailored to suit staff or line managers as appropriate. The discussions were conducted on a non-attributable basis.

4.2.1 Management of Competency Arrangements

31 NNB GenCo commenced development of its 'management of competency' arrangements in early 2010, drawing on limited experience of competency assessment arrangements in Nuclear Generation Limited. The initial approach identified by NNB GenCo focussed on competence requirements for NB role holders with particular emphasis on their role in meeting the requirements of specific nuclear site licence conditions. Following advice from ONR that this approach was too narrow, NNB GenCo subsequently modified its

approach to focus on the broader nuclear safety related activities undertaken by NB role holders. This change of approach introduced a delay in development and implementation but resulted in an improvement in the quality, relevance and acceptability of the arrangements.

32 NNB GenCo's competence arrangements are set out in the procedure NNB-OSL-PRO-000018 'Management of Competency'. The management of competency process is used to identify competence requirements for nuclear safety significant roles identified in the NB, development of a new NB role or amendment to an existing NB role where the role has been revised and competence requirements need to be re-assessed. It then compares those requirements with the individuals nominated for those roles, including embedded contractors, and identifies any shortfalls and actions required to address those shortfalls. The process comprises:

- Analysing a NB role for areas of competence. This includes developing a description of the role, defining nuclear safety related responsibilities, identifying applicable licence conditions and other legislative requirements. The analysis draws on up to date versions of Role Profiles and Job Descriptions held by NNB GenCo Human Resources (HR) department. The role is analysed to gain an understanding of the activities associated with implementing nuclear safety responsibilities. The process is led by the line manager and supported by relevant Subject Matter Experts (SMEs).
- Defining the areas of competence associated with the role. Once a clear understanding of the responsibilities and activities associated with a role has been developed, the competencies the role holder must possess are identified. A list of competencies is provided in a Competency Area Framework (see Annex 2) and competencies relevant to the role are selected from the list. Competency levels appropriate to each of the selected competencies are agreed by the line manager with the support of a SME if required.
- Identifying the training, experience and qualification requirements of the role. The training, experience and qualifications that can provide an individual with the necessary competence to perform a role are defined for each of the areas of competence. This provides a checklist of requirements that an individual is assessed against. The individual, line manager and SME use the checklist to identify any training courses that the individual may need to attend, any additional qualifications that the individual may require to fulfil the role, and any additional experience that the individual may need to gain.
- Assessing NB role holders against the competence and training requirements of the role. An individual's competence is assessed during a technical interview with the line manager responsible for that role. Evidence is gathered to demonstrate competence. That evidence is reviewed and any gaps in the individual's competence are identified and discussed to establish how they can be resolved. Actions to address gaps, including supervisory compensatory actions if an individual is not deemed to be fully competent to fulfil the role, are identified and included in an implementation plan. Completed assessments are signed off by the line manager as a record of individual competence and forwarded to the Training function for filing.

33 Our intervention identified that implementation of the competence assessment process had been facilitated by a NNB GenCo technical support contractor in conjunction with individual role holders and line managers. We found that their experience had assisted in

the development and implementation of the arrangements. Role holders had performed a self assessment to establish their competence against the areas of competence identified for the role. Line managers had reviewed the self assessment with the role holder and then jointly agreed the role holder's competence against the competence areas and identified training needs, development actions and supervisory compensatory actions in discussion with the role holder. Records of the reviews had been signed off by the line manager and forwarded to the NNB GenCo training function for filing.

34 T/AST/027 'Training and Assuring Personnel Competence' expects licensees to have a structured process in place to identify the tasks which are to be performed for each role, and the competencies needed to perform the associated tasks. It expects the output of the process to contribute towards the development of a role profile which should explicitly include the competencies needed to carry out the associated activities. My judgement is that the approach developed and applied by NNB GenCo as described in paragraph 27 and confirmed by the intervention meets these expectations.

35 Our intervention identified the following:

- There had generally been good dialogue between staff and their line managers to agree the target competencies, competency gaps and actions to address the gaps.
- Staff interviewed considered that the arrangements were good. They also considered that the exercise gave them the opportunity to understand their current level of competence against the target level identified for the role.
- Line managers were not leading development actions in some instances and individuals were being left to identify their training needs without knowledge of how those needs might be met.
- A process for normalisation of competency ratings needs to be established i.e. there was variability of approach to establishing the target competencies between the functional areas sampled.
- Application of the arrangements across individual functional areas was inconsistent i.e. more rigour had been applied in some functional areas than others.
- The qualifications and technical experience of an individual are not fully captured in the competency assessment documentation and a link is required between the role profile(s) and individual job descriptions to make this explicit.
- NNB GenCo HR department has developed a spreadsheet to record the nuclear baseline roles held by individuals with the aim of tracking progress with role assessment and, in particular, to identify any changes to the nuclear baseline that may be necessary as a result of role assessment. My judgement is that this is a good way of underpinning the nuclear baseline.

36 We shared the intervention findings with NNB GenCo's Head of Training, Pre-Operations Director, and HR as future improvements that we would expect NNB GenCo to address. NNB GenCo has accepted these findings.

37 NNB GenCo's management of competency arrangements concentrate on technical competencies. They do not include managerial and behavioural competencies. NNB GenCo is currently addressing how to include these competencies using a managerial and behavioural competency framework already established in its group parent company EDF Energy UK Ltd.

38 NNB GenCo has carried out a comprehensive Self Assessment and Independent Challenge and Oversight assessment (see Annex 2). Both assessments focussed on assessing the adequacy of implementation of NNB GenCo's training arrangements. The findings from these assessments have been shared with me and I consider them to be of a high quality. NNB GenCo has advised that it intends to improve its arrangements based on the assessment findings.

39 My judgement is that NNB GenCo's arrangements for the management of competency are adequate for the current stage of its organisational development.

4.2.2 Management Commitment

40 Our discussions during the series of working level meetings primarily involved the Head of Training. The Pre-Operations Director (Head of Training at the start of the series of meetings) attended meetings on an ad hoc basis to observe progress and to lend support to development and implementation of the competency arrangements. The Pre-Operations Director is the process owner for LC 12 and reports to the NNB GenCo Board for all matters relating to staff competence and training. He was able to demonstrate his commitment to developing and demonstrating staff competence.

41 The Design Authority has the largest number of nuclear baseline roles of all the NNB GenCo functions and the Head of Design Authority provided leadership and support to the competency assessment exercise within this part of the NNB GenCo organisation. The Head of Design Authority was interviewed as part of the intervention. Discussions with him and other Heads of Function have confirmed their commitment to the competence assessment process and the need to ensure that their staffs fully participate in the exercise.

42 Our discussions with line managers indicated good support for the competence assessment process. They considered that the competence assessment exercise gave them the opportunity to assess and understand the competence of their staff. This had been particularly useful where they had no prior knowledge of staff that they had inherited.

43 We were able to confirm that the responsibilities of the Head of Training, Heads of Function, line managers, SMEs, and NB role holders are clearly stated in the management of competency procedure.

44 My judgement is that NNB GenCo management support the approach to assessing and demonstrating staff competence and are committed to implementing the management of competency arrangements in their respective functional areas.

4.3 Future Developments

45 NNB GenCo has demonstrated a willingness to learn from initial implementation of its competence arrangements and has indicated that it intends to learn from this experience and apply it to the continuing development of the arrangements.

4.4 Comparison with Standards, Guidance and Relevant Good Practice

46 NNB GenCo's arrangements for LC 12 have been assessed against the requirements of the standards and associated guidance identified in section 2 of this report. Technical Assessment Guide T/AST/027 'Training and Assuring Personnel Competence' identifies the requirements and provides guidance for analysis of roles and associated competence. NNB's compliance arrangements have been assessed against this TAG.

- 47 NNB GenCo's management of competency arrangements are clearly defined and documented. They meet ONR's expectations as set out in T/AST/027.

5 CONCLUSIONS AND RECOMENDATIONS

5.1 Conclusions

Summary Remarks

48 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 arrangements for compliance with the conditions to be attached to the nuclear site licence has been conducted.

49 This report presents the findings of my assessment of NNB GenCo's compliance arrangements for Licence Condition 12 'Duly Authorised and Other Suitably Qualified and Experienced Persons'. The assessment considers the arrangements themselves, which are documented in NNB GenCo's 'management of competency' procedure, the level of implementation up to the end of July 2012, and future development needs. The assessment has been based on the requirements of IAEA Safety Standard GS-R-3 and the ONR Technical Assessment Guide T/AST/027.

50 The assessment considers the adequacy of NNB GenCo's management of competency arrangements, and their implementation, for the stage of development that NNB GenCo has reached at this point. Arrangements for the appointment of 'Duly Authorised Persons' are not required at this stage of the HPC project and are outside the scope of this assessment.

51 It is recognised that the arrangements will continue to evolve as the project proceeds, and continuing interaction with NNB is anticipated to gain assurance that the arrangements remain fit for purpose and that they are implemented effectively.

52 The key elements assessed have been NNB GenCo's management of competency arrangements and management commitment. NNB GenCo was able to demonstrate that its arrangements for compliance with Licence Condition 12 have the essential elements of a process for analysis of roles and associated competencies as defined in GS-R-3 and T/AST/027. The ongoing dialogue ONR and NNB GenCo have had in support of this workstream over the last two years has yielded positive benefits in terms of the approach adopted by NNB GenCo and the design of the arrangements.

53 The HPC project is in its early phases and the management of competency arrangements are still being refined and developed. Implementation has not yet matured but NNB GenCo has made significant progress and has established the key attributes of competence management arrangements. It was clear from the enthusiasm and attitudes of staff involved in the working level meetings over the last two years, during the intervention in May 2012 and the evidence of senior management support that there is an ongoing forward momentum within NNB GenCo to continue with the positive development of its arrangements.

54 The HPC project lifecycle has a number of key phases such as design, construction, commissioning, operation, shutdown and decommissioning. The Licence Condition 12 compliance arrangements will need to be robust and flexible enough to cope with staff competency requirements during in 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 operations to a requirement for competent operational staff. ONR will continue to monitor the development of these arrangements as the project progresses.

IIS Rating LC12 Duly authorised and other suitably qualified and experienced persons

55 NNB GenCo has made significant progress over the past two years which has been reflected in the working level meetings and the intervention in May 2012. Almost all of the nuclear safety significant roles identified on the nuclear baseline have been subject to competence assessment. The intervention confirmed that the arrangements have been implemented in a consistent manner. In recognition of the success that has been achieved and the strong positive forward momentum an **IIS rating of 3 (adequate) is allocated**.

Concluding Remarks

56 NNB GenCo has made significant progress with the development and implementation of its management of competency arrangements over the last two 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 arrangements as the project progresses. This requirement will increase as the project moves through its phases.

57 During the May 2012 intervention, NNB GenCo demonstrated that its arrangements had been satisfactorily implemented and its commitment to taking into account lessons learned from its own Self Assessment and Independent Assessment Challenge and Oversight assessment. A number of improvements were identified by ONR during its intervention and NNB GenCo is committed to acting on these.

58 The granting of a site licence will enhance rather than diminish ONR's ability to influence future progress with development of the arrangements. The arrangements are judged to be adequate for this stage of the project and will provide a sound platform for development as the project proceeds.

59 To conclude, I am broadly satisfied that NNB GenCo's compliance arrangements for ensuring that only suitably qualified and experienced persons perform any duties which may affect the safety of operations on the HPC under Licence Condition 12 are addressing the expectations of relevant standards. The 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 the arrangements are sufficiently far advanced for this stage of the project.

5.2 Recommendations

60 My recommendations are as follows.

- NNB GenCo's management of competency arrangements for compliance with Licence Condition 12, and the implementation of these arrangements, 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 management of competency arrangements.

6 REFERENCES

- 1 *ONR How2 Business Management System. Permissioning Reports. AST/003 Issue 5.* HSE. July 2010. www.hse.gov.uk/nuclear/operational/assessment/index.htm.
- 2 *Safety Assessment Principles for Nuclear Facilities.* 2006 Edition Revision 1. HSE. January 2008. www.hse.gov.uk/nuclear/SAP/SAP2006.pdf.
- 3 T/AST/027 Training and Assuring Personnel Competence
http://www.hse.gov.uk/nuclear/operational/tech_asst_guides/operational/tech_asst_guides/index.htm
- 4 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)
- 5 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.
- 6 Application for a Nuclear Site Licence for Hinkley Point. ONR-HPC-20143R. NNB GenCo. July 2011. TRIM 2011/503357.
- 7 NNB GenCo Nuclear Site Licence Application Dossier. NNB GenCo. July 2011. TRIM 2011/442090.
- 8 Intervention Report IR 12123. Verification of Competence Arrangements 15 – 18, 28 May 2012. TRIM 2012/263681.

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Table 1

Relevant Safety Assessment Principles Considered During the Assessment

| SAP No. | SAP Title | Description |
|---------|----------------------|---|
| MS.2 | Capable Organisation | This makes reference to an organisation needing adequate human resources having the necessary competences and knowledge in such numbers as to maintain the capability to manage safety reliably at all times. |
| EHF.8 | Personnel Competence | This makes reference to an organisation applying a systematic approach to the identification of personnel competence. |

Annex 1

Working level meetings and interventions to discuss LC12 compliance arrangements

| Date | Location | Topic | TRIM Ref. |
|-------------|---------------------------|---|------------------|
| 26/04/10 | Bootle | L4 Training and Competence (CR 10068) | 2010/341435 |
| 30/07/10 | Bootle | L4 Training and Competence (CR 10063) | 2010/338006 |
| 02/12/10 | London | L4 Training and Competence (CR 10164) | 2010/18110 |
| 27/01/11 | Cheltenham | L4 Training and Competence (CR 11018) | 2011/72286 |
| 03/03/11 | Gloucester | L4 Training and Competence (CR 11049) | 2011/295462 |
| 08/11/11 | Barnwood | L4 Training and Competence (IR 11214) | 2011/110846 |
| 23/02/12 | Barnwood | L4 Training and Competence (IR 12017) | 2012/124606 |
| 15-28/05/12 | London Barnwood HPC | Verification of Competence Arrangements Intervention (IR 12138) | 2012/263681 |
| 22/06/12 | London | L4 Training and Competence (IR 12127) | 2012/282141 |

Annex 2

Documents considered

| Title | Document Number |
|---|--------------------|
| Management of Competency | NNB-OSL0PRO-000018 |
| NNB GenCo Nuclear Baseline Parts A and B | NNB-HRE-ASS-000001 |
| Competency Area Framework | NNB-OSL-SPE-000005 |
| Independent Assessment - NNB GenCo Training and Qualification | NNB-OSL-REP-000264 |
| Self Assessment – Training and Qualification Initial Self Assessment | L3BHPCNSLASA01160 |
| NNB GenCo Organisational Capability Arrangements – Workstreams 12 to 15 | ONR-CNRP-AR-12-100 |
| Control and Instrumentation (C&I) Workstream Assessment to Inform Nuclear site Licensing of NNB GenCo Hinkley Point C | ONR-CNRP-AR-12-092 |
| 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 |
| NNB GenCo - Hinkley Point C Licence Condition 14 Report for Licensing | ONR-CNRP-AR-12-083 |
| Hinkley Point C Human Factors Assessment | ONR-CNRP-AR-12-086 |