



PROJECT ASSESSMENT REPORT			
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<b>Site:</b>	Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B power stations		
<b>Title:</b>	Approvals under Licence Condition 23(4) for Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B power stations		
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**Review of regulation under Licence Condition 23**

**Approvals under Licence Condition 23(4) for Torness, Hartlepool, Heysham 1,  
Dungeness B and Hinkley Point B power stations**

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## EXECUTIVE SUMMARY

### Title

Approvals under Licence Condition 23(4) for Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B power stations.

### Permission Requested

This project assessment report presents the basis and rationale for issuing approvals under Licence Condition 23(4) of the nuclear site licenses for Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B power stations.

This will constitute the second of two tranches of approvals to be issued to EDF Energy Nuclear Generation Ltd (NGL) power stations, pursuant to specification numbers 539 <sup>[7]</sup>, 559 <sup>[8]</sup>, 607 <sup>[9]</sup>, 550 <sup>[10]</sup> and 552 <sup>[11]</sup> respectively served on Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B power stations on 23 May 2016.

### Background

NGL power stations are operated in accordance with limits and conditions of operation (referred to by NGL as LCOs) that are set down within Technical Specifications; these typically specify the plant configuration and availability requirements, protection settings and parameter values that define a safety envelope beyond which the plant shall not be intentionally operated.

In accordance with Licence Condition (LC) 23(4), a subset of limits and conditions (referred to in NGL's LC14 arrangements as Nuclear Safety Requirements (NSR)) were approved by ONR (Nuclear Installations Inspectorate at the time), following the progressive extension of Sizewell B Technical Specification methodology to NGL's seven Advanced Gas-cooled Reactor stations (AGRs) after 2000. Any subsequent alteration or amendment to an NSR requires primary power approval in accordance with the requirements of LC 23(5). ONR granted such approvals to a specified subset of limits and conditions in order to secure a continued regulatory footprint, following the transition from AGR station Operating Rules to Technical Specification LCOs.

In 2015, the operating reactors sub-programme undertook a review of ONR's regulatory oversight of LC 23 approvals <sup>[1]</sup>. This review recommended that ONR should refocus its regulatory oversight away from individual limits and conditions and instead permission, using derived powers, only changes to Operating Rules which have the highest nuclear safety significance through arrangements under LC 22(1); it is considered that ONR's regulatory oversight will be more risk-informed and will ensure ONR has improved agility to employ its specialist resource in a more discretionary manner. In effect, this will result in the withdrawal of all NSRs from Technical Specifications at each power station.

The review further recommended the need to retain a risk-informed regulatory footprint, embodied through adjustments to the existing LCO application statements. Application statements constitute conditions of operation that set out the protocols for operational compliance with Technical Specifications. In order for NGL to implement this change and request approval of changes to the Technical Specifications, ONR served new specifications in May 2016, in accordance with condition 23(4) of each nuclear site licence. These specifications required NGL to submit to ONR modified chapters to the Technical Specifications, and supersede those issued to each power station following the introduction of NSRs.

In compliance with these specifications, each power station has submitted to ONR requests to approve those new chapters, which will prevent further amendment without ONR's approval.

Specifications and approvals have been served and granted in two phases:

- Tranche 1: Specifications and approvals already issued to Hunterston B, Heysham 2 and Sizewell B in March / April 2016;
- Tranche 2: Specifications issued to Hinkley Point B, Heysham 1, Hartlepool, Dungeness B and Torness in May 2016. This PAR considers the subsequent requests for approval.

The approval licence instruments will withdraw all previously issued approvals extant at that time for each station.

### **Assessment and inspection work carried out by ONR in consideration of this request**

EC 357823 <sup>[2]</sup>, EC 356960 <sup>[3]</sup>, EC 357968 <sup>[4]</sup>, EC 358301 <sup>[5]</sup> and EC 357986 <sup>[6]</sup> for Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B respectively propose to re-issue Technical Specifications Chapter 1, Section 1.3 (the LCO Application Statements) and associated commentary, with the inclusion of a new LCO Application Statement, A0 for each station. NGL has stated that this provides an explicit link between the Technical Specification Application Statements and the requirements of the Site Licence. It also includes a requirement that any proposed change to Technical Specifications deemed to be a Category 1 Plant Modification will be submitted to ONR for acknowledgement or agreement.

In my opinion, the proposed revision to LCO Application Statements will strengthen ONR's footprint on the station's obligations to operate in accordance with the protocols set out with the Technical Specification LCOs; it further emphasises that the licensee is compelled to follow its arrangements made under LC 22(1) to control any modification to any LCO. Any proposed modification to an LCO classified as Category 1 will be treated in the same manner as a proposal to implement a modification to a Category 1 safety case.

I consider that the proposal to amend the LCO Application Statements and delete Chapter 2 NSRs for Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B accords with the principles set out in ONR's review of regulation under LC 23 <sup>[1]</sup>, and ensure an appropriate risk-informed regulatory footprint is retained.

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

There are no other matters arising from ONR's work in relation to the granting of approvals under LC 23(4) to Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B.

### **Conclusions**

I conclude that the licensee's proposals to amend the Technical Specifications application statements for Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B, and delete the NSRs will accord with the principles set out in ONR's review of regulation under LC 23 <sup>[1]</sup>, and ensure an appropriate risk-informed regulatory footprint is retained. This approach ensures better alignment with ONR's mission, providing effective and efficient regulation of the nuclear industry, whilst holding it to account on behalf of the public.

### **Recommendations**

I recommend that:

- The superintending inspector should sign this Project Assessment Report to confirm support for the technical and regulatory arguments that justify the granting of approvals under Licence Condition 23(4) to Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B.
- The Operating Facilities programme director, in his capacity as Deputy Chief Inspector, who is authorised to act on behalf of ONR, should sign Licence Instrument approvals 540, 560, 608, 551 and 554 to enable Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B respectively to implement the operating rules set out below, as set out within the Technical Specifications:

Torness power station: Chapter 1 – Section 1.3 Application Statement

Hartlepool power station: Chapter 1 – Section 1.3 Application Statement

Heysham 1 power station: Chapter 1 – Section 1.3 Application Statement

Dungeness B power station: Chapter 1 – Section 1.3 Application Statement

Hinkley Point B power station: Chapter 1 – Section 1.3 Application Statement

## LIST OF ABBREVIATIONS

OFP	Operating Facilities programme
EC	Engineering Change
ESPEC	Environmental Specification
INSA	Independent Nuclear Safety Assessment
LC	Licence Condition
LCO	Limiting Condition of Operation
NGL	EDF Energy Nuclear Generation Limited
NII	Nuclear Installations Inspectorate
NSC	Nuclear Safety Committee
NSR	Nuclear Safety Requirement
OA	Operator Action
ONR	Office for Nuclear Regulation
PAR	Project Assessment Report

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## 1 PERMISSION REQUESTED

1. This project assessment report presents the basis and rationale for issuing approvals under Licence Condition 23(4) of the nuclear site licenses for Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B power stations.
2. This will constitute the second of two tranches of Approvals to be issued to EDF Energy Nuclear Generation Ltd (NGL) power stations, pursuant to specification numbers 539 <sup>[7]</sup>, 559 <sup>[8]</sup>, 607 <sup>[9]</sup>, 550 <sup>[10]</sup> and 552 <sup>[11]</sup> respectively served on Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B power stations on 23 May 2016.

## 2 BACKGROUND

3. NGL power stations are operated in accordance with limits and conditions of operation (referred to by NGL as LCOs) that are set down within Technical Specifications; these typically specify the plant configuration and availability requirements, protection settings and parameter values that define a safety envelope beyond which the plant shall not be intentionally operated.
4. In accordance with Licence Condition (LC) 23(4), a subset of limits and conditions (referred to in NGL's LC14 arrangements as Nuclear Safety Requirements (NSR)) were approved by ONR (Nuclear Installations Inspectorate at the time), following the progressive extension of Sizewell B Technical Specification methodology to NGL's seven Advanced Gas-cooled Reactor stations (AGRs) after 2000. Any subsequent alteration or amendment to an NSR requires primary power approval in accordance with the requirements of LC 23(5). ONR granted such approvals to a specified subset of limits and conditions in order to secure a continued regulatory footprint, following the transition from AGR station Operating Rules to Technical Specification LCOs.
5. In 2015, the operating reactors sub-programme undertook a review of ONR's regulatory oversight of LC 23 approvals <sup>[1]</sup>. This review recommended that ONR should refocus its regulatory oversight away from individual limits and conditions and instead permission, using derived powers, only changes to Operating Rules which have the highest nuclear safety significance through arrangements under LC 22(1); it is considered that ONR's regulatory oversight will be more risk-informed and will ensure ONR has improved agility to employ its specialist resource in a more discretionary manner. In effect, this will result in the withdrawal of all NSRs from Technical Specifications at each power station.
6. The review further recommended the need to retain a risk-informed regulatory footprint, embodied through adjustments to the existing LCO application statements. Application statements constitute conditions of operation that set out the protocols for operational compliance with Technical Specifications. In order for NGL to implement this change and request approval of changes to the Technical Specifications, ONR served new specifications in May 2016, in accordance with condition 23(4) of each nuclear site licence. These specifications required NGL to submit to ONR modified chapters to the Technical Specifications, and supersede those issued to each power station following the introduction of NSRs.
7. In compliance with these specifications, each power station has submitted to ONR requests to approve those new chapters, which will prevent further amendment without ONR's approval.
8. Specifications and approvals have been served and granted in two phases:  
  
Tranche 1: Specifications and approvals already issued to Hunterston B, Heysham 2 and Sizewell B in March / April 2016;

Tranche 2: Specifications issued to Hinkley Point B, Heysham 1, Hartlepool, Dungeness B and Torness in May 2016. This PAR considers the subsequent requests for approval.

9. The approval licence instruments will withdraw all previously issued approvals extant at that time for each station.

### **3 ASSESSMENT AND INSPECTION WORK CARRIED OUT BY ONR IN CONSIDERATION OF THIS REQUEST**

10. In response to ONR's review of regulation under Licence Condition 23, NGL has issued revisions to the Technical Specifications in order to assist in the implementation of this risk-informed regulatory footprint.
11. As part of the second tranche of permissions, NGL has presented engineering change documents for Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B. These documents have been verified and subject to independent nuclear safety assessment (INSA) and set out the basis with which NGL has proposed to implement a modified regulatory footprint in the context of parameters set out in paragraph 6.
12. NGL has proposed to delete Chapter 2 Nuclear Safety Requirements from the Technical Specifications for all eight stations. For the seven AGR stations (Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B for the purposes of tranche 2), NGL is seeking approval of a revised version of Chapter 1, section 1.3. Specific detail of proposed changes is presented below for each of the stations in tranche 2.
13. EC 357823 <sup>[2]</sup>, EC 356960 <sup>[3]</sup>, EC 357968 <sup>[4]</sup>, EC 358301 <sup>[5]</sup> and EC 357986 <sup>[6]</sup> for Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B respectively propose to re-issue Technical Specifications Chapter 1, Section 1.3 (the LCO Application Statements) and associated commentary, with the inclusion of a new LCO Application Statement, A0 for each station. NGL has stated that this provides an explicit link between the Technical Specification Application Statements and the requirements of the Site Licence. It also includes a requirement that any proposed change to Technical Specifications deemed to be a Category 1 Plant Modification will be submitted to ONR for acknowledgement or agreement.
14. In my opinion, the proposed revision to LCO Application Statements will strengthen ONR's footprint on the station's obligations to operate in accordance with the protocols set out with the Technical Specification LCOs; it further emphasises that the licensee is compelled to follow its arrangements made under LC 22(1) to control any modification to any LCO. Any proposed modification to an LCO classified as Category 1 will be treated in the same manner as a proposal to implement a modification to a Category 1 safety case.
15. I consider that the proposal to amend the LCO Application Statements and delete Chapter 2 NSRs for Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B accords with the principles set out in ONR's review of regulation under LC 23 <sup>[1]</sup>, and ensure an appropriate risk-informed regulatory footprint is retained.

### **4 MATTERS ARISING FROM ONR'S WORK**

16. Examination of NS-PER-IN-001 – Appendix 3 (Preparation and issue of Licence Instruments) has revealed that on this occasion, a non-routine Licence Instrument format is required. The routine format does not provide sufficient text to withdraw any pre-existing approved operating rules associated with a previously issued specification under LC 23(4).

17. Government Legal office has proposed an additional template <sup>[12]</sup> to address this circumstance; this has been adopted as a single licence instrument giving effect to an approval and withdrawal of all extant approvals.
18. There are no other matters arising from ONR's work in relation to the issue of approvals under LC 23(4) to Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B.

## 5 CONCLUSIONS

- 6 I conclude that the licensee's proposals to amend the Technical Specifications application statements for Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B, and delete the NSRs will accord with the principles set out in ONR's review of regulation under LC 23 <sup>[1]</sup>, and ensure an appropriate risk-informed regulatory footprint is retained. This approach ensures better alignment with ONR's mission, providing effective and efficient regulation of the nuclear industry, whilst holding it to account on behalf of the public.

## 7 RECOMMENDATIONS

19. I recommend that:
  - The superintending inspector should sign this Project Assessment Report to confirm support for the technical and regulatory arguments that justify the granting of approvals under Licence Condition 23(4) to Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B.
  - The Operating Facilities programme director, in his capacity as Deputy Chief Inspector, who is authorised to act on behalf of ONR, should sign Licence Instrument approvals 540, 560, 608, 551 and 554 to enable Torness, Hartlepool, Heysham 1, Dungeness B and Hinkley Point B respectively to implement the operating rules set out below, as set out within the Technical Specifications:

Torness power station: Chapter 1 – Section 1.3 Application Statement

Hartlepool power station: Chapter 1 – Section 1.3 Application Statement

Heysham 1 power station: Chapter 1 – Section 1.3 Application Statement

Dungeness B power station: Chapter 1 – Section 1.3 Application Statement

Hinkley Point B power station: Chapter 1 – Section 1.3 Application Statement

## 8 REFERENCES

1. TRIM 2015/322669 – Proposal to reform the use of primary powers under licence condition 23 – [REDACTED] – February 2016
2. TRIM 2016/270869 – Request for approval under licence condition 23(4) amendment to nuclear safety requirements – Torness – 30 June 2016
3. TRIM 2016/274161 – Request for approval under licence condition 23(4) amendment to nuclear safety requirements – Hartlepool – 30 June 2016
4. TRIM 2016/274182 – Request for approval under licence condition 23(4) amendment to nuclear safety requirements – Heysham 1 – 30 June 2016
5. TRIM 2016/278783 – Request for approval under licence condition 23(4) amendment to nuclear safety requirements – Dungeness B – 6 July 2016
6. TRIM 2016/272377 – Request for approval under licence condition 23(4) amendment to nuclear safety requirements – Hinkley Point B – 30 June 2016
7. TRIM 2016/212082 – NGL Torness – Licence Instrument Number 548 - Granted Under Condition 23(4) of Schedule 2 Attached to Nuclear Site Licence No.Sc.14 - Issued 23 May 2016
8. TRIM 2016/212088 – NGL Hartlepool – Licence Instrument Number 559 - Granted Under Condition 23(4) of Schedule 2 Attached to Nuclear Site Licence No. 59 - Issued 23 May 2016
9. TRIM 2016/212095 – NGL Heysham 1 – Licence Instrument Number 607 - Granted Under Condition 23(4) of Schedule 2 Attached to Nuclear Site Licence No.60 - Issued 23 May 2016
10. TRIM 2016/212098 – NGL Dungeness B – Licence Instrument Number 550 - Granted Under Condition 23(4) of Schedule 2 Attached to Nuclear Site Licence No.61 - Issued 23 May 2016
11. TRIM 2016/212123 – NGL Hinkley Point B – Licence Instrument Number 552 - Granted Under Condition 23(4) of Schedule 2 Attached to Nuclear Site Licence No.62C - Issued 23 May 2016
12. TRIM 2016/159079 - EDF-NGL Government Solicitors agreement to non-standard licence instrument