

## Generic assessment of candidate nuclear power plant designs

### Interim statement of design acceptability for the UK EPR™ design submitted by

**Electricité de France SA and AREVA NP SAS (EDF and  
AREVA)**

The Environment Agency has undertaken a Generic Design Assessment of the EDF and AREVA UK EPR™ design, during the period July 2007 to June 2011, using the process set out in the document Process and Information Document for Generic Assessment of Candidate Nuclear Power Plant Designs<sup>1</sup>.


The findings of our assessment are summarised in the Decision Document for the Generic Design Assessment of EDF and AREVA's UK EPR<sup>2</sup>.

The Environment Agency is satisfied that EDF and AREVA has demonstrated the acceptability for environmental permitting of the UK EPR on the generic site, as defined in Schedule 1, subject to the GDA Issues identified in Schedule 2.

This statement is provided as advice to EDF and AREVA, under section 37 of the Environment Act 1995. It does not guarantee that any site-specific applications for environmental permits for the UK EPR will be successful.

Name

Date

<p>[name of authorised person]</p>  <p>Ian Parker Manager, Nuclear Regulation Group (North)</p>	<p>14 December 2011</p>
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Authorised on behalf of the Environment Agency

#### References

1. Process and Information Document for Generic Assessment of Candidate Nuclear Power Plant Designs, Environment Agency, January 2007. <http://publications.environment-agency.gov.uk/pdf/GEHO0107BLTN-e-e.pdf>
2. Decision Document for the Generic Design Assessment of EDF and AREVA's UK EPR™, Environment Agency, December 2011.

# Schedule 1 – Scope of the GDA

This interim statement of design acceptability refers to the UK EPR as described in the design reference documentation:

- a) *Reference Design Configuration* UKEPR-I-002 Revision 10. EDF and AREVA, May 2011.
- b) UK EPR GDA Step 4 *Consolidated Pre-Construction Environment Report*. EDF and AREVA, March 2011, as detailed in EDF and AREVA letter UN REG EPR00998N 18 November 2011.
- c) The documents identified in the Submission Master List: *UK EPR GDA Submission Master List*. UKEPR-0018-001 Issue 01, EDF and AREVA, 18 November 2011.

Certain aspects have been agreed as being out of scope for GDA and these are identified by EDF and AREVA in the Reference Design Configuration document at a) above.

# Schedule 2 – GDA Issues

## EDF AND AREVA UK EPR GENERIC DESIGN ASSESSMENT

### GDA ISSUE

#### CONSOLIDATED FINAL GDA SUBMISSION INCLUDING AGREED DESIGN CHANGE FOR THE UK EPR

#### GI-UKEPR-CC-02 REVISION 3

<b>Technical Area</b>		<b>CROSS CUTTING</b>	
<b>Related Technical Areas</b>		<b>All</b>	
<b>GDA Issue Reference</b>	<b>GI-UKEPR-CC-02</b>	<b>GDA Issue Action Reference</b>	<b>GI-UKEPR-CC-02.A1</b>
<b>GDA Issue</b>	<p>EDF and AREVA to continue to control, maintain and develop the GDA submission documentation, including the Safety, Security and Environment Report (SSER), Submission Master List (SML) and design reference document and deliver final consolidated versions of these as the key references to any Design Acceptance Confirmation (DAC) / Statement of Design Acceptability (SoDA) the Office for Nuclear Regulation (ONR) or Environment Agency (the joint Regulators) may issue at the end of GDA. These should include the management and acceptance of changes to GDA submission documentation impacted by design changes agreed for inclusion in GDA.</p> <p><b>This GDA Issue is raised by both ONR and Environment Agency.</b></p>		
<b>GDA Issue Action</b>	<p>EDF and AREVA to fully implement its processes to manage the implementation and acceptance of amendments to documentation impacted by design changes agreed for inclusion in GDA, including any other additionally agreed design changes associated with other GDA Issues Resolution Plans. This should involve the incorporation of all relevant amendments into the impacted documentation associated with design changes, including the Reference Design Configuration Document UKEPR-I-002, the Pre-Construction Safety Report (PCSR), and the Pre-Construction Environment Report (PCER).</p> <p>Evidence we expect to see to address this action includes:</p> <ul style="list-style-type: none"> <li>• Revision of GDA submission documentation impacted by design changes agreed for inclusion in GDA and scheduled to be updated before the end of GDA; in particular, amendments to submission level 2 design information such as System Design Manuals (SDMs) impacted by design changes agreed for inclusion in GDA.</li> <li>• Acceptance by EDF and AREVA of amendments to submission level 2 design change documentation provided by a GDA supplier (for example SOFINEL as a supplier of amended SDMs)</li> <li>• Completion of Independent Nuclear Safety Assessment (INSA) and Independent Peer Review (IPR) where applicable and incorporation of Design Safety Review Committee (DSRC) recommendations into the GDA submission documentation, where appropriate, for any design changes</li> </ul>		

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<b>Technical Area</b>		<b>CROSS CUTTING</b>	
<b>Related Technical Areas</b>		<b>All</b>	
<b>GDA Issue Reference</b>	<b>GI-UKEPR-CC-02</b>	<b>GDA Issue Action Reference</b>	<b>GI-UKEPR-CC-02.A1</b>
	<p>agreed for inclusion in GDA.</p> <ul style="list-style-type: none"> <li>• Application of appropriate surveillance arrangements for suppliers/contractors used for the products.</li> </ul> <p>To facilitate our assessments and our inspections in this area the programme of deliverables of amended impacted design change documentation will need to include sufficient time for us to complete our assessments before we may issue any DAC/SoDA.</p> <p>With agreement from the joint Regulators this action may be completed by alternative means.</p>		

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<b>Technical Area</b>		<b>CROSS CUTTING</b>	
<b>Related Technical Areas</b>		<b>All</b>	
<b>GDA Issue Reference</b>	<b>GI-UKEPR-CC-02</b>	<b>GDA Issue Action Reference</b>	<b>GI-UKEPR-CC-02.A2</b>
<b>GDA Issue Action</b>	<p>EDF and AREVA to apply the revised Design Change procedure in order to identify and transfer all relevant agreed incomplete GDA design changes into Nuclear Site Licensing and permissioning activities, and Environmental Permitting.</p> <p>Evidence we expect to see provided to address this action includes:</p> <ul style="list-style-type: none"> <li>• Examples of application of arrangements for transfer of incomplete GDA design changes into Nuclear Site Licensing and Environmental Permitting activities.</li> </ul> <p>With agreement from the joint Regulators this action may be completed by alternative means.</p>		

**EDF AND AREVA UK EPR GENERIC DESIGN ASSESSMENT**

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**GI-UKEPR-CC-02 REVISION 3**

<b>Technical Area</b>		<b>CROSS CUTTING</b>	
<b>Related Technical Areas</b>		<b>All</b>	
<b>GDA Issue Reference</b>	<b>GI-UKEPR-CC-02</b>	<b>GDA Issue Action Reference</b>	<b>GI-UKEPR-CC-02.A3</b>
<b>GDA Issue Action</b>	<p>EDF and AREVA shall continue to control, maintain and develop the GDA submission documentation, including the SSER, SML and design reference document and shall deliver final consolidated versions of these as key references to any DAC/SoDA we may issue at the end of GDA.</p> <p>Evidence we expect to see to address this action:</p> <ul style="list-style-type: none"> <li>• Application of EDF and AREVA due processes, including QA and technical reviews for the control and development of the GDA submission documentation scheduled to be created or updated before the end of GDA and contained within the SSER, SML and design reference document to address GDA Issue resolution, agreed design changes, and any other updates agreed with the joint Regulators.</li> <li>• Application of EDF and AREVA due processes, including technical reviews, INSA and IPR where applicable and QA consolidation checks on final GDA submission documentation scheduled to be created or updated before the end of GDA and contained within the SSER, SML and design reference document. The final GDA submission documentation is to be referenced from any DAC/SoDA we may issue. The evidence should include: <ul style="list-style-type: none"> <li>- Management and incorporation of all review comments and DSRC recommendations in the final consolidated documentation as necessary.</li> <li>- The full assessment of impacts arising from proposed modifications or changes in specific topic areas, including consequential impacts across the SSER.</li> </ul> </li> <li>• Delivery of final consolidated GDA submission documentation scheduled to be created or updated before the end of GDA including SSER, SML and design reference document in good time for regulatory assessment prior to any decisions to issue DAC/SoDA that would reference these documents</li> </ul> <p>With agreement from the joint Regulators this action may be completed by alternative means.</p>		

**EDF AND AREVA UK EPR GENERIC DESIGN ASSESSMENT**

**GDA ISSUE**

**CONSIDER AND ACTION PLANS TO ADDRESS THE LESSONS LEARNT FROM THE  
FUKUSHIMA EVENT**

**GI-UKEPR-CC-03 REVISION 3**

<b>Technical Area</b>		<b>CROSS CUTTING</b>	
<b>Related Technical Areas</b>		<b>All</b>	
<b>GDA Issue Reference</b>	<b>GI-UKEPR-CC-03</b>	<b>GDA Issue Action Reference</b>	<b>GI-UKEPR-CC-03.A1</b>
<b>GDA Issue</b>	EDF and AREVA are required to demonstrate how they will be taking account of the lessons learnt from the unprecedented events at Fukushima, including those lessons and recommendations that are identified in the HM Chief Inspector’s interim and final reports.		
<b>GDA Issue Action</b>	<p>EDF and AREVA to address the lessons learnt from their internal review following the Fukushima event relevant to GDA for the UK EPR.</p> <p>Evidence we expect to see provided to address this action includes:</p> <ol style="list-style-type: none"> <li>1) Internal review summary report</li> <li>2) A plan for the necessary actions arising from the internal review report</li> <li>3) Modification of the following, as appropriate: <ol style="list-style-type: none"> <li>a. Design Reference and SSERs</li> <li>b. Submission Master List documentation (Levels 1-3), including amendments to submission level 2 design information such as SDMs in accordance with GDA Issue GI-UKEPR-CC.02</li> <li>c. Resolution Plans in response to other relevant GDA Issues</li> </ol> </li> <li>4) Confirmation that any design changes resulting from these reviews for inclusion into GDA will be managed in accordance with the UK EPR GDA Project Procedure UKEPR-I-003.</li> </ol> <p>With agreement from the Regulators this action may be completed by alternative means.</p>		

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<b>Technical Area</b>		<b>CROSS CUTTING</b>	
<b>Related Technical Areas</b>		<b>All</b>	
<b>GDA Issue Reference</b>	<b>GI-UKEPR-CC-03</b>	<b>GDA Issue Action Reference</b>	<b>GI-UKEPR-CC-03.A2</b>
<b>GDA Issue</b>	EDF and AREVA are required to demonstrate how they will be taking account of the lessons learnt from the unprecedented events at Fukushima, including those lessons and recommendations that are identified in the HM Chief Inspector’s interim and final reports.		
<b>GDA Issue Action</b>	<p>EDF and AREVA to address the lessons learnt that are relevant to GDA for UK EPR from HM Chief Inspector Nuclear Installations’ interim and final reports.</p> <p>Evidence we expect to see provided to address this action includes:</p> <ol style="list-style-type: none"> <li>1) A Plan to address the relevant actions arising from HM Chief Inspector’s interim and final reports.</li> <li>2) Modification of the following, as appropriate: <ol style="list-style-type: none"> <li>a. Design Reference and SSERs</li> <li>b. Submission Master List documentation (Levels 1-3), including amendments to submission level 2 design information such as SDMs in accordance with GDA Issue GI-UKEPR-CC.02</li> <li>c. Resolution Plans in response to other relevant GDA Issues</li> </ol> </li> <li>3) Confirmation that any design changes resulting from these reviews for inclusion into GDA will be managed in accordance with the UK EPR GDA Project Procedure UKEPR-I-003.</li> </ol> <p>With agreement from the Regulators this action may be completed by alternative means.</p>		