



Department
of Energy &
Climate Change

The Justification of Practices Involving Ionising Radiation Regulations 2004

Consultation on the Nuclear Industry Association's Application to Justify the UK Advanced Boiling Water Reactor (UK-ABWR)

Volume 1 – Consultation Document

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Executive summary

This is a public consultation on an application by the Nuclear Industry Association for a regulatory justification decision on the UK Advanced Boiling Water Reactor (UK-ABWR), which Hitachi and Horizon propose to build and operate at Wylfa on Anglesey and Oldbury in Gloucestershire.

The application is for a class or type of practice defined as:

“The generation of electricity from nuclear energy using oxide fuel of low enrichment in fissile content in a light water cooled, light water moderated thermal reactor currently known as the UK-ABWR designed by Hitachi-GE Nuclear Energy Ltd”.

Regulatory justification is a process based on EU legislation which requires that before any new class or type of practice involving ionising radiation can be introduced in the UK, the Government must first assess it to determine whether the economic, social or other benefits associated with the class or type of practice outweigh any health detriments it may cause

The application and this public consultation are the first part of a regulatory justification process which will be followed by a further consultation on a draft regulatory justification decision by the Secretary of State as Justifying Authority.

Chapter 1 - Introduction

Purpose of the consultation

- 1.1. This consultation seeks responses to an application submitted by the Nuclear Industry Association (NIA), the representative body for the nuclear industry in the UK, for a regulatory justification decision in relation to the UK Advanced Boiling Water Reactor (UK-ABWR). Volume 2 of this consultation contains the text of the application and should be read with this consultation document. This consultation also sets out how the regulatory justification process applies to classes or types of practice and seeks views on the Government's preliminary view on the proposed class or type of practice in this case.
- 1.2. The application contains evidence which aims to demonstrate that the economic, social or other benefits associated with the class or type of practice proposed in the application outweigh any health detriments it may cause. It is the responsibility of the Secretary of State for Energy and Climate Change to reach a decision on whether a proposed class or type of practice qualifies as a new or existing class or type of practice. If new, the Secretary of State as Justifying Authority must then make a decision on whether it is Justified.
- 1.3. This consultation forms part of the regulatory justification process. The responses received will help inform the Secretary of State's decision on whether the application relates to a new class or type of practice. They will also inform the Secretary of State's consideration of the application as Justifying Authority. After the close of the consultation, the Secretary of State will consider the responses to it and the NIA's application. The Secretary of State will then produce a draft decision in relation to the application which will be published for consultation later this year. Following that consultation, the Secretary of State expects to make a final decision in relation to the application. An indicative timetable is at Appendix A.
- 1.4. This Chapter of the consultation document sets out what regulatory justification is. It explains that it is a high level process and that there are later licensing and consents processes which examine site-specific issues. Chapter 2 discusses the issues around the definition of a class or type of practice. Chapter 3 covers the NIA's application. Chapter 4 sets out the questions in relation to the NIA's application and the Government's preliminary view which people should address in responding to the consultation. Chapter 5 and Appendix A outline the remaining stages of the consultation process. Volume 2 of this consultation is a copy of the NIA's application. This should be read with this consultation document.

Legislative and regulatory background

- 1.5. Regulatory justification is based on the internationally accepted principle of radiological protection: that no practice involving exposure to ionising radiation should be adopted unless it produces sufficient benefits to the exposed individuals or to society in general to outweigh any health detriment it may cause. This principle is derived from the

recommendations of the international Commission on Radiological Protection (ICRP), in particular, ICRP 60.¹

- 1.6. European Council Directive 96/29/Euratom of 13 May 1996 (“the Basic Safety Standards Directive”)² makes regulatory justification a requirement of EU law and requires that all new classes or types of practice resulting in exposure to ionising radiation are justified in advance of being first adopted or approved by their economic, social or other benefits in relation to the health detriment they may cause.
- 1.7. The Basic Safety Standards Directive has been implemented in UK law in relation to regulatory justification by the Justification of Practices Involving Ionising Radiation Regulations 2004³ (“the Regulations”). The Regulations prescribe the process for justifying new classes or types of practice.
- 1.8. The Department for Environment, Food and Rural Affairs (Defra) published Guidance on the application and administration of the Regulations⁴. The Regulations have been the responsibility of the Department of Energy and Climate Change (DECC) since the creation of that Department in October 2008.
- 1.9. Regulatory justification is the first of a number of regulatory tests that must be satisfied before a new type of nuclear power station can be built in the UK. By itself it does not amount to permission to build such a station, but provides a high level assessment of the associated benefits and health detriment.
- 1.10. There are other ICRP principles (optimisation and limitation) relevant to the approval of nuclear power stations. These are applied after the regulatory justification process through further statutory regulatory processes: licensing, authorisations and planning consents, which examine site-specific issues. These further processes ensure that the number of people exposed, the likelihood of incurring exposures and the magnitude of individual doses are kept as low as reasonably achievable (taking account of economic and social factors), and below statutory dose limits.

Health detriment

- 1.11. As stated above, before any new class or type of practice involving ionising radiation can be introduced in the UK the Government must first assess it to determine whether the economic, social or other benefits associated with the class or type of practice outweigh any health detriments it may cause
- 1.12. The Basic Safety Standards Directive defines “health detriment” as “an estimate of the risk of reduction in length and quality of life occurring in a population following exposure to ionising radiations. This includes loss arising from somatic effects, cancer and severe genetic disorder”. A key feature of regulatory justification is the requirement for an

¹ <http://www.icrp.org>

² http://ec.europa.eu/energy/nuclear/radioprotection/doc/legislation/9629_en.pdf

Negotiations have recently concluded on a revised Basic Safety Standards Directive, although the revisions will not alter the Directive’s basic purpose

<http://www.hse.gov.uk/aboutus/europe/euronews/dossiers/radiationprotect.htm>

³ <http://www.legislation.gov.uk/uksi/2004/1769/contents/made>

⁴ http://webarchive.nationalarchives.gov.uk/20121217150421/http://decc.gov.uk/assets/decc/what%20we%20do/uk%20energy%20supply/energy%20mix/nuclear/whitepaper08/actions/regjust/1_20090817172537_e_@@_justificati onguidance.pdf

assessment of the health detriment which might be caused by a class or type of practice.

- 1.13. Applicants seeking regulatory justification in relation to new nuclear power stations need to demonstrate to the satisfaction of the Justifying Authority that any health detriment from ionising radiation is outweighed by the benefits associated with the proposed class or type of practice.

Government responsibility

- 1.14. The Department of Energy and Climate Change (DECC) is the Department responsible for co-ordinating the regulatory justification process across Government and is the policy lead for the Regulations.
- 1.15. Under the Regulations, the Justifying Authority in the UK is either the Secretary of State responsible for that subject matter, or one of the three Devolved Administrations (the Scottish Government, the Welsh Government and the Northern Ireland Executive) to the extent that they have competence in respect of the subject matter of a particular regulatory justification application.
- 1.16. The Concordat on the Implementation of the Justification of Practices Involving Ionising Radiation Regulations 2004⁵ (the Concordat) governs the working relations between the Justifying Authorities in a way which respects the devolution settlements. The Concordat makes provision for the establishment of a Justification Liaison Group (the JLG), made up of DECC and the Devolved Administrations.
- 1.17. Before making a regulatory justification decision, the Justifying Authority is required to consult with the Devolved Administrations, and with statutory consultees: the Health and Safety Executive, the Food Standards Agency, Public Health England, the Environment Agency, the Scottish Environment Protection Agency, Natural Resources Wales and the Department of the Environment for Northern Ireland.
- 1.18. The Justification Co-ordination Committee (the JCC) was established to help co-ordinate the views of the JLG, the statutory consultees and other Government bodies. The JCC meetings are chaired by officials from DECC, and membership is made up of officials from the Devolved Administrations, the statutory consultees, the Department of Health, the Nuclear Decommissioning Authority and the Office for Nuclear Regulation.
- 1.19. The subject matter of this application is nuclear energy, a matter which has not been devolved to any of the Devolved Administrations under the devolution settlements. Therefore, the Secretary of State is the sole Justifying Authority in this case and his decision is UK-wide. The consultation arrangements outlined above will apply in the case of this application.

New nuclear Regulatory Justification

- 1.20. In May 2007, the Government published a technical consultation on a proposed process for regulatory justification of new nuclear power stations⁶ as part of a public consultation on the role of nuclear power. Responses to the consultation informed the development of this regulatory justification process and the development of guidance for applicants.

⁵ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/248909/concordat-justification.pdf

⁶ <http://webarchive.nationalarchives.gov.uk/+/http://www.berr.gov.uk/files/file39199.pdf>

- 1.21. In January 2008, the Government published its White Paper on Nuclear Power⁷ which confirmed the process it intended to follow for regulatory justification. In March 2008, the Government issued a call for regulatory justification applications for new nuclear power stations and guidance for applicants⁸. In June 2008, the Government received an application from the NIA for a regulatory justification decision in relation to: 'the generation of electricity from nuclear energy using oxide fuel of low enrichment in fissile content in light water cooled, water moderated thermal reactors using evolutionary designs'.
- 1.22. A public consultation on the application was published in December 2008⁹ and ran until March 2009. In this consultation the Government set out its preliminary view that decisions by the Justifying Authority should be by reference to four classes or types of practice, based on four individual reactor designs: the ACR1000, the AP1000, the EPR and the ESBWR.
- 1.23. A further public consultation on proposed decisions by the Justifying Authority that two of these practices, the AP1000 and the EPR, should be justified, was published in November 2009¹⁰ and ran until February 2010. The Justifying Authority published his final decisions that the AP1000 and EPR should be justified in October 2010¹¹ and after consideration by both Houses of Parliament, the decisions were brought into effect by the passing of regulations in November 2010¹².
- 1.24. This is the first application for regulatory justification of a new nuclear reactor design since the 2008 application.

⁷[http://webarchive.nationalarchives.gov.uk/20100512172052/http://www.decc.gov.uk/media/viewfile.ashx?filepath=what we do/uk energy supply/energy mix/nuclear/whitepaper08/file43006.pdf&filetype=4](http://webarchive.nationalarchives.gov.uk/20100512172052/http://www.decc.gov.uk/media/viewfile.ashx?filepath=what%20we%20do/uk%20energy%20supply/energy%20mix/nuclear/whitepaper08/file43006.pdf&filetype=4)

⁸<http://webarchive.nationalarchives.gov.uk/20121217150421/http://decc.gov.uk/assets/decc/what%20we%20do/uk%20energy%20supply/energy%20mix/nuclear/whitepaper08/actions/regjust/file45384.pdf>

⁹<http://webarchive.nationalarchives.gov.uk/20121217150421/http://www.decc.gov.uk/en/content/cms/consultations/nuclear/nuclear.aspx>

¹⁰http://webarchive.nationalarchives.gov.uk/20121217150421/http://www.decc.gov.uk/en/content/cms/consultations/reg_just_cons/reg_just_cons.aspx

¹¹<https://www.gov.uk/government/publications/regulatory-justification-decisions-on-nuclear-reactors>

¹²<http://www.legislation.gov.uk/uksi/2010/2845/contents/made>

Chapter 2 – Class or Type of Practice

- 2.1 The regulatory justification process applies to “classes or types of practice”. “Class or type of practice” is not defined in the Directive or Justification Regulations. The Directive defines “practice” as “a human activity that can increase the exposure of individuals to radiation from an artificial source or from natural radiation sources where use is being made of its radioactive, fissile or fertile properties”.
- 2.2 The Regulations provide that a person may apply to the Justifying Authority seeking a decision as to whether a particular class or type of practice is new for the purposes of the Regulations and if so, whether it is justified. A practice is a “new practice” for the purposes of regulation 4 of the Regulations if no practice in that class or type was carried out in the United Kingdom before 13 May 2000 and if the class or type of practice has not been previously found to be justified. If the class or type of practice is new then it must be justified before being introduced. If it is existing then no regulatory justification decision is required. A register of “existing practices” is maintained and is available on the DECC website¹³
- 2.3 In considering an application for regulatory justification, the Secretary of State must
- determine what the class or type of practice described in the application is; and
 - determine whether it should be considered as a new or existing class or type of practice for the purposes of the Regulations
- 2.4 Acting as Justifying Authority, the Secretary of State must then, if it is a new class or type of practice, determine whether or not the proposed class or type of practice is justified under the Regulations.
- 2.5 The NIA’s application is for a class or type of practice covering a single reactor design, the UK-ABWR. This is consistent with the Secretary of State’s decision following the NIA’s previous application, and public consultation, to treat each proposed reactor design as a separate and new class or type of practice¹⁴.
- 2.6 The Secretary of State’s preliminary view, therefore, is that the UK-ABWR:
- is capable of being assessed as a class or type of practice;
 - is a new class or type of practice and therefore requires a regulatory justification decision by the Secretary of State as Justifying Authority.

¹³ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/47939/1_20100318123942_e____j_ustificationregister.pdf

¹⁴ <http://webarchive.nationalarchives.gov.uk/20121217150421/http://www.decc.gov.uk/en/content/cms/consultations/nuclear/nuclear.aspx>
http://webarchive.nationalarchives.gov.uk/20121217150421/http://www.decc.gov.uk/en/content/cms/consultations/reg_just_cons/reg_just_cons.aspx

- 2.7 The Secretary of State’s preliminary view on this matter is the subject of Question 1 in this consultation document – see Chapter 4.

Chapter 3 – The Application

- 3.1 In December 2013, the Government received an application from the NIA for a Justification decision in relation to the following class or type of practice: “*The generation of electricity from nuclear energy using oxide fuel of low enrichment in fissile content in a light water cooled, light water moderated thermal reactor currently known as the UK-ABWR designed by Hitachi-GE Nuclear Energy Ltd*”. The application asks for a decision as to whether the proposed class or type of practice is new or existing and if it is new, whether it is justified.
- 3.2 The text of the NIA’s application is at Volume 2 of this consultation, and should be read with this consultation document.
- 3.3 The application has been considered by the JCC, which has agreed that the application should be published for consultation. This agreement is without prejudice to any response to consultation or other advice which members of the JCC might want to make in the future.

Chapter 4 – Summary of questions

- 4.1 Responses will be most useful if they are framed in direct response to the questions posed, though further comments and evidence are also welcome.

Consultation Questions	
1.	<p>Do you agree with the Government’s preliminary view that the class or type of practice set out in the application submitted by the Nuclear Industry Association:</p> <p>(a) qualifies as a new class or type of practice; and</p> <p>(b) is a suitable class or type of practice for a decision by the Secretary of State?</p> <p>If not, why not?</p>
2.	<p>Does the application contain sufficient information to enable the Justifying Authority to make an assessment of the class or type of practice in the application? If not, what further evidence is needed?</p>
3.	<p>Do you have any comments on the arguments or evidence in the NIA’s application? Are there any additional arguments or evidence which the Justifying Authority should consider?</p>
4.	<p>Do you have any other comments on the Secretary of State’s preliminary view of the class or type of practice, on the approach of the NIA, or any other options?</p>
5.	<p>As part of the further consultation on the draft decision document, the Secretary of State proposes to run public engagement events. Do you have any suggestions about the format of such events?</p>

Chapter 5 – How to respond

- 5.1 This consultation began on **18 February 2014** and will close on **13 May 2014**.
- 5.2 Responses should be submitted, preferably by e-mail to:
UK-ABWR Regulatory Justification Application
Department of Energy and Climate Change
Room 108
55 Whitehall
London
SW1A 2EY
Email: abwrjustification@decc.gsi.gov.uk
- 5.3 When responding, please state whether you are responding as an individual or representing the views of an organisation. If you are responding on behalf of an organisation, please make it clear who the organisation represents and, where applicable, how you assembled the views of members.
- 5.4 When considering responses to this consultation, the Government will give greater weight to responses that are based on argument and evidence, rather than simple expressions of support or opposition.
- 5.5 You may make copies of this document without seeking permission. An electronic version can be found at <https://www.gov.uk/government/consultations/nuclear-industry-association-application-to-justify-the-advanced-boiling-water-reactor>

Confidentiality and data protection

- 5.6 Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information legislation (primarily the Freedom of Information Act 2000, the Data Protection Act 1998 and the Environmental Information Regulations 2004).
- 5.7 If you want information that you provide to be treated as confidential please say so clearly in writing when you send your response to the consultation. It would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded by us as a confidentiality request.

Consultation conduct

- 5.8 This consultation has been carried out in accordance with the Government's Consultation Principles, which can be found here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/60937/Consultation-Principles.pdf

5.9 If you have any complaints about the consultation process (as opposed to comments about the issues which are the subject of the consultation) please address them to:

DECC Consultation Co-ordinator

3 Whitehall Place

London SW1A 2AW

Email: consultation.coordinator@decc.gsi.gov.uk

Chapter 6 – What happens next?

- 6.1 Responses to this consultation will be taken into account in determining the class or type of practice, undertaking the regulatory justification assessment, determining whether sufficient information has been provided in support of the application and preparing the Justifying Authority's draft decision document.
- 6.2 The draft decision document will be subject to a further public consultation later this year. The draft decision document will include a summary of responses and an explanation of how the Secretary of State has taken the responses into account in reaching his draft decision. We will also publish individual responses on our website but with people's personal names, addresses or other contact details redacted.

Public engagement

- 6.3 In addition to the further written consultation on the draft decision document, the Government proposes to run public engagement events during that second consultation to provide an opportunity for interested parties to ask questions about the draft decision document. This is the subject of Question 5 in this consultation document – see Chapter 4.

Appendix A

Indicative timetable

Regulatory justification process	Indicative Timetable
Government received application from Nuclear Industry Association (NIA).	December 2013
Justification Co-ordination Committee considered application.	December 2013 – January 2014
Public consultation on the NIA application (current stage)	18 February 2014
Closing date for responses.	13 May 2014
Consider comments received, seek further information as necessary, and prepare draft decision document, in consultation with the JCC. Draft decision document will set out the Justifying Authority's assessment of the benefits and detriments of the class or type of practice.	May – July 2014
Public consultation on draft decision document, including public engagement events.	July – October 2014
Decision by Secretary of State: if the class or type of practice is found to be Justified, the Justifying Authority will make a regulatory justification decision in the form of secondary legislation (a Statutory Instrument).	January – March 2015
Bring to the attention of any person likely to be affected by the decision by writing to the applicant, issuing a press notice and publishing notices in the London, Edinburgh and Belfast Gazettes.	January – March 2015

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