HORIZON
NUCLEAR POWER

The Justification of Practices Involving Ionising Radiation Regulations 2004

Consultation on the Secretary of State's Proposed Decision as Justifying Authority on the Regulatory Justification of the UK Advanced Boiling Water Reactor (UK ABWR)

Response from Horizon Nuclear Power

Introduction

Horizon Nuclear Power

Horizon is a UK energy company developing a new generation of nuclear power stations. The company was established in 2009 following the Government's announcement that new nuclear energy would be a core element in its policy to meet the UK's future carbon emission reduction and security of supply goals. The company was acquired by Hitachi in late 2012.

Horizon owns two of the eight sites designated for new build in the National Policy Statement for nuclear power generation, which it acquired through the auction process administered by Government. Horizon plans to provide at least 5,400MW of new power station capacity to the UK, with the first project to be located at Wylfa on the island of Anglesey in North Wales. Horizon plans to deliver two Hitachi-GE UK Advanced Boiling Water reactors (UK ABWR) at its Wylfa Newydd site, each generating around 1,350MW.

Horizon anticipates main construction of Wylfa Newydd beginning around 2019, with the first unit to be operational in the first half of the 2020s. No decisions have yet been made about the timing of construction of further units beyond Wylfa, but the first project is likely to form the basic template for a further project at Horizon's Oldbury site in South Gloucestershire, which would follow construction of the Wylfa plant.

The Nuclear Industry Association made the Regulatory Justification application with the active support of Horizon.

Consultation Questions

1. **Chapter 1 (The Secretary of State's Proposed Decision) sets out the Secretary of State's proposed decision that the class or type of practice is justified by its benefits in relation to the health detriment it may cause. Do you agree or disagree with the Secretary of State's proposed decision? Please state the reasons for your answer. Do you consider that there are any matters relevant to the proposed decision that are not referred to in this Chapter? If so, please state what they are, and explain how and why they are relevant, and state what conclusions you think should be reached in light of these matters.**

i. Horizon welcomes the opportunity to respond to the consultation and to the Secretary of State's proposed decision. We agree with the proposed decision set out by the Secretary of State and believe that the application, and the Secretary of State's views in response, clearly demonstrate the benefits deployment of the UK ABWR would bring with regards to carbon reduction and security of supply, as well as the additional wider economic benefits. We also agree that all the relevant matters have been discussed and fully considered.

2. **Chapter 4 (Carbon Reduction) sets out the evidence on the potential benefit through carbon reduction arising from the class or type of practice. It also sets out the Secretary of State's current views based on that information. Do you agree or disagree with the views presently held by the Secretary of State on these matters? Please state the reasons for your answer. Do you consider that there are any matters relevant to the potential benefit through carbon reduction that are not referred to in this Chapter? If so, please state what they are, and explain how and why they are relevant, and state what conclusions you think should be reached in light of these matters.**

ii. We agree with the Secretary of State's conclusion that the UK ABWR would assist the UK in meeting its carbon reduction targets. Nuclear is a proven and reliable source of clean, baseload electricity and new nuclear power stations, including the UK ABWR, will have a key role to play in helping the UK combat climate change in the decades ahead.

3. **Chapter 5 (Security of Supply and other Economic Effects) sets out the evidence on the potential benefit through security of supply and other economic factors arising from the class or type of practice. It also sets out the Secretary of State's current views based on that information. Do you agree or disagree with the views presently held by the Secretary of State on these matters? Please state the reasons for your answer. Do you consider that there are any matters relevant to the potential benefit through security of supply and other economic factors that are not referred to in this Chapter? If so, please state what they are, and explain how and why they are relevant, and state what conclusions you think should be reached in light of these matters.**

iii. We agree with the Secretary of State's conclusions on all topics covered in Chapter 5. In particular, if deployed, the UK ABWR would have a key role to play in ensuring security of supply for the UK, given the adequate and stable world supply of uranium, the very low risk of interruption of fuel supply, and its ability to provide steady and stable baseload electricity.

4. **Chapter 6 (Radiological Health Detriment) sets out the evidence on the potential radiological health detriment arising from the class or type of practice. It also sets out the Secretary of State's current views based on that information. Do you agree or disagree with the views presently held by the Secretary of State on these matters? Please state the reasons for your answer. Do you consider that there are any matters relevant to the potential radiological health detriment that are not referred to in this Chapter? If so, please state what they are, and explain how and why they are relevant, and state what conclusions you think should be reached in light of these matters.**

iv. We agree with the Secretary of State's conclusions that the deployment of the UK ABWR would lead to very limited health impacts and that dose levels would remain within the very strict limits set.

v. The ABWR is a proven technology and the extensive arrangements that will be put in place, both technical and regulatory, will serve to ensure that dose rates would be so low as to be of no health significance.

5. **Chapter 7 (Radioactive Waste) sets out the evidence on the potential detriment caused by the radioactive waste arising from the class or type of practice. It also sets out the Secretary of State's current views based on that information. Do you agree or disagree with the views presently held by the Secretary of State on these matters? Please state the reasons for your answer. Do you consider that there are any matters relevant to the potential detriment arising from the management and disposal of radioactive waste that are not referred to in this Chapter? If so, please state what they are, and explain how and why they are relevant, and state what conclusions you think should be reached in light of these matters.**

vi. We agree with the Secretary of State's conclusions that any potential health detriment from radioactive waste and spent fuel arising from the deployment of the UK ABWR would be very small.

vii. We also agree that the radioactive waste and spent fuel arising would raise no materially different technical issues in terms of management and disposal from those presented by existing operating reactors. In addition, it would raise no materially different technical issues to those presented by previously Justified new build reactors.

viii. It is also clear that all necessary financial arrangements to ensure the radioactive waste and spent fuel arising is managed and disposed of will be put in place as a pre-condition of deployment of the UK ABWR.

6. **Chapter 8 (Environmental Detriment) sets out the evidence on the potential environmental detriment arising from the class or type of practice. It also sets out the Secretary of State's current views based on that information. Do you agree or disagree with the views presently held by the Secretary of State on these matters? Please state the reasons for your answer. Do you consider that there are any matters relevant to the potential environmental detriment that are not referred to in this Chapter? If so, please state what they are, and explain how and why they are relevant, and state what conclusions you think should be reached in light of these matters.**

ix. We agree with the Secretary of State's conclusions that the potential environmental impacts of deployment of the UK ABWR are manageable and would not be significantly different to those of other forms of electricity generation.

x. We also agree that there are robust and thorough arrangements in place through the planning process or other existing legal and regulatory processes to fully consider and effectively mitigate these potential impacts.

7. **Chapter 9 (Safety, Security and Safeguards) sets out the evidence on the potential impact of the class or type of practice in terms of safety and security. It also sets out the Secretary of State's current views based on that information. Do you agree or disagree with the views presently held by the Secretary of State on these matters? Please state the reasons for your answer. Do you consider that there are any matters relevant to safety and security that are not referred to in this Chapter? If so, please state what they are, and explain how and why they are relevant, and state what conclusions you think should be reached in light of these matters.**

xi. We agree with the Secretary of State's conclusions that deployment of the UK ABWR would raise no new safety or security risks that are not already stringently addressed by industry and overseen by the effective UK and international regulatory and safeguard regimes in place.

8. **Are there any other points which you wish to make?**

xii. No