EDF

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)

EDF Energy's response to your questions

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.

EDF Energy agrees with the Secretary of State's proposed decision that the practice of operating a UK ABWR for the purposes of generating electricity is justified. This is because its benefits would be substantial in terms of providing secure supplies of low carbon electricity, and would outweigh potential health detriments, which would be very small as long as the design is built and operated in compliance the UK regulatory regime for safety, security and environmental protection.
All relevant matters are summarised in Chapter 1, which also includes a consideration of potential environmental detriments. We would note that this aspect, whilst of relevance in the context of any future environmental impact assessment, is not required in order to decide whether the practice is justified under the Justification of Practices Involving Ionising Radiation Regulations 2004.

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.

EDF Energy agrees with the views set out on behalf of the Secretary of State in relation to carbon reduction from this practice. It is vital that all practicable and affordable measures are taken to reduce carbon emissions and mitigate the damaging effects of climate change, and to meet international obligations and national targets.

The evidence base that nuclear power stations can make a significant contribution to carbon reduction, through providing supplies of baseload electricity with very low carbon emissions compared with the alternative of burning fossil fuels, is robust. Studies carried out for EDF Energy support the conclusion that the full lifecycle carbon emissions for nuclear power stations are of the same order as those for renewables such as wind power.

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.

EDF Energy agrees with the Secretary of State's view that this practice has significant potential benefits in terms of security of supply and other economic factors. Nuclear power station construction projects have the potential to provide a significant economic boost to the UK economy. The availability of secure supplies of affordable electricity is essential for the economy to grow, and there is an urgent need for investment in replacement nuclear capacity. EDF Energy's proposed investment in up to four EPR reactors (with a total capacity of up to 6.4 GW) will not replace all the existing capacity which is likely to close in the 2020s.
EDF Energy has no direct operating experience of the Boiling Water Reactor (BWR) technology proposed, but there is considerable worldwide experience, which shows that BWRs are capable of operating reliably and efficiently.

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.

EDF Energy agrees with the Secretary of State's view. The assessment of potential health detriment is based on sound evidence. As we stated in response to the consultation on the Nuclear Industry Association's application, exposure to ionising radiation for power station workers at BWRs has historically been higher than for pressurised water reactors (PWRs). However, for both types of reactor, the levels of exposure during normal

operation are well within the recommended limits set by the International Commission on Radiological Protection (ICRP). The NIA application provided evidence that experience with the ABWR design in Japan has shown that it can be operated with lower total exposures than for typical PWRs in Japan.
The UK regulatory regime provides a robust independent system to ensure that operators meet UK safety and security standards in order to protect the health and safety of workers and the public.

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.

EDF Energy agrees with the Secretary of State's view on potential health detriments from radioactive waste. The management of radioactive waste arising from the proposed practice will follow established methods to ensure that the workers and the public are protected from any hazards that could have a potential health detriment.

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.

EDF Energy agrees with the views of the Secretary of State. However, as noted above, potential environmental detriments will be considered through the application of the Environmental Impact Assessment process, should an application for development consent be made for a project that involves the proposed practice.

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.

EDF Energy agrees with the Secretary of State's view. As noted above, the UK regulatory regime provides a robust independent system to ensure that operators meet UK safety and security standards in order to protect the health and safety of workers and the public. The Office for Nuclear Regulation also sets the requirements for compliance with international safeguards in respect of nuclear materials. However, these are only indirectly relevant to an assessment of the justification of the proposed practice.

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

No.