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Report of	Assistant Director for Place and Client	Author	Sandra Scott, Shelley Blackaby & Belinda Silkstone  282975, 508635 and 282745
Title	Consultation on Generic design assessment of General Nuclear System Limited's UK Hualong pressurised (water) reactor (UK HPR1000)		
Wards affected	All		

1. Executive Summary

- 1.1 The Environment Agency is consulting on the findings of the Generic design assessment (GDA) of the General Nuclear System Limited's UK Hualong pressurised (water) reactor (UK HPR1000). This is the reactor technology which is planned for use at Bradwell B, a proposed new nuclear power station at Bradwell-on-Sea. This consultation relates to the generic design of the reactors and it is not site specific. The GDA process is separate to the development consent order (DCO) process, which is also being progressed. This report summarises the GDA consultation and outlines the next steps. A draft response to the consultation is appended to the report.

2. Recommended Decision

- 2.1 It is recommended that the consultation response to the GDA consultation, attached as Appendix 1, is submitted to the Environment Agency.

3. Reason for Recommended Decision

- 3.1 Colchester Borough Council has a policy of objecting to new nuclear at Bradwell and is committed to engaging in the process to influence decisions relating to a new nuclear power station at Bradwell.

4. Alternative Options

- 4.1 The Council could decide not to respond to this consultation, which is very technical and not site specific.

5. Background Information

Background

- 5.1 The Environment Agency and the Office for Nuclear Regulation (ONR) work together to make sure that any new nuclear power stations built in the UK meet high standards of safety, security, environmental protection and waste management. Generic design assessment (GDA) is the first step in the process of scrutinising new nuclear power station designs. The Environment Agency is consulting on its assessment of the UK Hualong pressurised (water) reactor (UK HPR1000) nuclear power station design. Whilst, as the name suggests, a generic design has been assessed, rather than a site-specific design, the proposals for Bradwell B include two UK HPR1000 reactors.
- 5.2 General Nuclear System Ltd (GNSL) is a UK company that is owned jointly by China General Nuclear (CGN) and Électricité de France (EDF). Both companies are major providers of nuclear technologies, in China and France respectively and are promoting a new nuclear power station at Bradwell-on-Sea. CGN has developed and is constructing new nuclear power stations in China using Hualong reactors. The UK HPR1000 power station is based on the Hualong design and has been submitted to the UK nuclear regulators for GDA.
- 5.3 GDA allows the Environment Agency and the ONR to begin scrutinising new nuclear power station designs well in advance of construction starting. This means that any potential design issues can be identified at an early stage and the regulators can ask the reactor design company to address issues.
- 5.4 The Environment Agency launched a consultation on 11 January 2021 asking for views on their preliminary conclusions following the detailed assessment of environmental aspects of the UK HPR1000 new nuclear power station design. The consultation ends on 4 April 2021. The GDA is a lengthy process, the GDA process of the UK HPR1000 began in September 2017 and a decision is expected in 2022.
- 5.5 Successfully completing GDA would not mean that construction of a new nuclear power station could begin at Bradwell. Planning permission is required through a development consent order (DCO). The Bradwell B Project held a Stage One consultation in spring 2020 as part of the early stages of the DCO process. Further consultation and further work as part of the Environmental Impact Assessment (EIA) is required before it can be submitted to the Secretary of State. In February 2021 BRB announced that the essential engagement with local authorities and other statutory stakeholders and public consultation as part of the DCO will be temporarily put on hold.

Generic design assessment (GDA)

- 5.6 The Environment Agency and the ONR, as nuclear regulators, developed the GDA process at the request of government in 2006. Access to GDA is controlled by government. GDA enables early assessment of safety, security and environment protection aspects of new reactor designs at a generic level, before receiving an application to consider a particular nuclear power station design at a specific location.
- 5.7 In the first phase of GDA, the Environment Agency assess power station designs and provide a statement about the acceptability of each design. There may be matters that cannot be initially resolved. These are identified as 'GDA Issues'. The assessment process can then be extended while these issues are resolved. There are also matters

which are best resolved at the site-specific stage by the proposed operator. These are 'Assessment Findings'. The Environment Agency's preliminary findings for the UK HPR1000 are the subject of this consultation.

- 5.8 A GDA Issue is an unresolved issue that is significant, but resolvable, and which requires resolution before construction of the reactor starts. The company must publish a 'resolution plan' setting out how it will address the issue. All GDA Issues must be resolved to the satisfaction of the regulators before GDA can be completed. An Assessment Finding is an unresolved issue that is not considered critical to the decision to start construction and will need to be addressed during the design, procurement, construction or commissioning phase.
- 5.9 Once this stage is completed, the next phase of the GDA process is assessing applications for environmental permits for a specific site. The Environment Agency take into account all of the work carried out during GDA and focus on site-specific matters, including how the operator is addressing GDA Assessment Findings. Further public consultations are held as part of this second phase before deciding whether or not to issue operational permits for a specific site.
- 5.10 Following the close of this consultation, the Environment Agency will consider all responses to the consultation and complete their assessments. They will decide whether to issue a statement of design acceptability (SoDA), an interim statement of design acceptability if there are any outstanding issues to be addressed, or no statement of design acceptability. The Environment Agency aims to publish its final conclusions in early 2022. If a SoDA is issued it would mean that the design is suitable for use in England, subject to any developer securing all relevant permits, licences and consents.

Consultation

- 5.11 As part of this consultation, the Environment Agency has published eight preliminary assessment reports and an independent dose assessment alongside the consultation document. Based on the findings so far, the preliminary conclusion is that the Environment Agency consider many of the environmental aspects of the design would be acceptable. However, there are six potential GDA Issues to be addressed and forty Assessment Findings. A draft Interim SoDA forms part of the consultation.
- 5.12 Whilst this consultation is not about the need for nuclear power, UK energy policy, policy relating to the siting of nuclear power stations, or the safety and security of the design or about the DCO process, the draft CBC response (Appendix 1) does refer to CBCs policy of objecting to new nuclear at Bradwell. In drafting this report and draft response Officers have liaised with BANNG and other Essex local authorities and attended a meeting with the Environment Agency and BANNG.
- 5.13 The consultation documents include a consultation plan, which was published on 21 December 2020. The consultation plan lists various stakeholders that will be consulted and refers to stakeholder events. It would have been useful if the plan included specific details of consultation events, particularly as it was published just three weeks before the consultation commenced.
- 5.14 The Environment Agency were established in 1996 to protect and improve the environment. They are responsible for regulating major industry and waste, treatment of contaminated land, water quality and resources, fisheries, inland river, estuary and harbour navigations, conservation and ecology and for managing the risk of flooding from

main rivers, reservoirs, estuaries and the sea. CBC consults the Environment Agency on planning documents and planning applications and accepts their views as experts in the above issues. CBCs response to this consultation is brief as Officers recognise that the Environment Agency are experts in the environment and unlike CBC, they employ suitably qualified and experienced people to assess and consider the design of nuclear power stations. The views of experts in the field of nuclear energy will be important.

6. Equality, Diversity and Human Rights implications

- 6.1 This consultation commenced during a national lockdown, which may impact on the ability of all equality groups to engage with the consultation process.

7. Strategic Plan References

- 7.1 Whilst this consultation is based on a generic assessment and not a site specific assessment, the UK HPR1000 reactor is proposed at Bradwell B. Bradwell B has the potential to negatively impact on the priority under the themes of Tackling the climate challenge and leading sustainability and Celebrating our heritage and culture. It has the potential to contribute positively towards the Growing a fair economy so everyone benefits theme.

8. Consultation

- 8.1 The Environment Agency is consulting on the findings of its detailed generic design assessment (GDA) of UK HPR1000. Consultation commenced on 11 January and will close on 4 April 2021. A consultation plan has been published. However, this does not include details of specific consultation events or highlight areas where views would be especially helpful, which would be useful to those wanting to engage in the consultation

9. Publicity Considerations

- 9.1 The Environment Agency have publicised the consultation. The comments about consultation are relevant.

10. Financial implications

- 10.1 There are no direct financial implications for Colchester Borough Council other than staff time in responding to this consultation.

11. Health, Wellbeing and Community Safety Implications

- 11.1 There are no health, wellbeing and community safety implications arising from this decision.

12. Health and Safety Implications

- 12.1 There are no health and safety implications arising from this decision.

13. Risk Management Implications

- 13.1 There are no risk management implications arising from this decision

14. Environmental and Sustainability Implications

- 14.1 The Council has declared a Climate Emergency and has committed to being carbon neutral by 2030. We recognise that government accepts that nuclear power has a role in the UK's energy future as a low carbon technology, however we do not believe that nuclear power is a low carbon technology when the whole life cycle is taken into account. Climate change is an argument against nuclear power, not for it, and CBC believes that nationally there should be a focus on renewable energy technologies.

Appendices

Appendix 1. Draft CBC Response to GDA HPR1000 Consultation

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Thank you for consulting Colchester Borough Council (CBC) on the GDA HPR1000 consultation. CBC is a key stakeholder in proposals for Bradwell B. We are a neighbouring authority and Mersea Island, within the borough, is located across the water from Bradwell-on-Sea. Development of a new nuclear power station will affect the borough.

CBC has set a policy of objecting to new nuclear at Bradwell due to the local environmental impacts and prefers a focus on renewable energy alternatives.

CBC were disappointed that the consultation plan did not include specific details of consultation events, particularly as it was published just three weeks before the consultation commenced. It would have been useful to plan attendance and share information about consultation events with our residents.

CBC agrees with BANNG that very little is conveyed on what the consultation is about and its purpose. We agree with BANNG that indicating those areas where views would be especially helpful would be useful to those wanting to engage in the consultation. Whilst the consultation does include a summary document it is over 600 pages long and made up of numerous, complex and technical documents. CBC believes that local communities, both groups and individuals, would be more likely to respond to the consultation if they were directed to particular areas where their views would be especially helpful.

The views of experts in the field of nuclear energy will be important and should be fully taken into account by the Environment Agency.

CBC, would however like to make the following comments.

Whilst we are advised that this is a Generic Consultation, the consultation and targets refer to Bradwell. How will the Council be reassured that if approved, GDA HPR1000 at the generic site has the parameters suitable for specific sites i.e., Bradwell?

The GDA HPR1000 is not currently operating in the UK, and therefore the radioactive discharges predicted in the technical documentation, are based on other operating sites. We would like to see some more certainty in the figures provided including a reduction in headroom.

Nationally, the Environment Agency has responsible for flooding, however for Nuclear Power, this is considered by the ONR. We would like the changes associated with climate change, and the environmental risk associated with flooding to be fully considered throughout the process, to ensure that the site can be properly protected.

CBC believes that a Health Impact Assessment and Social Impact Assessment should be prepared to assess the impacts on communities and wellbeing.

1. Do you have any views or comments on our preliminary conclusions on management systems?

No comments

2. Do you have any views or comments on our preliminary conclusions on strategic considerations for radioactive waste management?

CBC welcomes the expectation that decommissioning of the plant is to be considered at the design stage. However, CBC considers that this should be a requirement rather than an expectation and that the impacts on people and the environment are minimised.

Technical questions 3 – 15 – No comments