

EN-7 Nuclear energy consultation – IET response

Question 1:

To what extent do you agree with the modification of this approach in light of the consultation feedback: To retain the < 50 MW (electric) threshold in the existing planning framework and to review our position in the future?

AGREE

Question 1a (OPTIONAL): If you would like to explain your response, please use the text box (free text, max 150 words)

It is important to retain the <50MW (electric) threshold for nuclear power plants (NNPs) although it is currently rare for developers to propose constructing NPP's below this threshold. Since this may change it is essential that there is a clear outline on what will trigger a review of the existing planning framework in the future. More clarity is needed as microreactors that could be used for community energy projects may fall into this category and be unnecessarily impacted. Microreactors could also be employed to decarbonise industrial facilities through heating provisions, and it is therefore critical that they should not be unnecessarily constrained by the NSIP. Microreactors should be seen as separate technology that should not be included in the NSIP unless the heat they produce is for a nationally significant cause. In general, producing heat itself does not qualify as nationally significant as there is no national heat network.

Question 2:

To what extent do you believe the draft National Policy Statement is adequately future proofed to accommodate advancements in nuclear technologies? Please indicate the extent to which you agree or disagree with the question.

AGREE

Question 2a (OPTIONAL): If you would like to explain your response, please use the text box (free text, max 150 words)

As the National Policy Statement is not technology specific, it is therefore adequately future proofed to accommodate advancements in nuclear technologies. Site assessment criteria would also be future proofed, although each technology and design choice may vary depending on its particular characteristics and will most likely be suitable to meet the criteria stated in these documents. Allowing suitable flexibility with regards to multiple reactors and leaving it to the developer to decide whether to develop in a single or multiple phase approach would support the advancement of nuclear technologies. This is especially the case for Small Modular Reactors (SMRs)

which may be deployed at many sites simultaneously, and Advanced Modular Reactors (AMRs) where the first-of-a-kind may be quickly augmented by future revisions of the design in a multi-phase approach on a single site.

Question 3:

Are there specific planning or siting considerations that should be addressed to ensure the National Policy Statement remains flexible to deployment of nuclear in diverse locations?

YES

Question 3a (OPTIONAL): If you would like to explain your response, please use the text box (free text, max 150 words)

There are instances that do not follow typical NPP deployment such as offshore development and greater clarity will be needed to ensure the National Policy Statement remains flexible to deployment of these developments. If floating NPPs, or NPPs on offshore platforms are intentionally included then it would be helpful to make this explicit in the National Policy Statement.

Question 4:

To what extent do you agree with the proposal to remove the distinction between previously exclusionary and discretionary criteria (see paragraph 1.1.7 (v) for more information)? Please indicate the extent to which you agree or disagree with the proposal

STRONGLY AGREE

Question 4a (OPTIONAL): If you would like to explain your response, please use the text box (free text, 150 words)

Whilst we agree with the proposal to remove the distinction between previously exclusionary and discretionary criteria, population density criterion and military criterion are still exclusionary. The consultation document doesn't make it clear that there are still exclusionary criteria, just that there are fewer instances whereby they can be applied. This should be addressed with clarity provided. For criteria which are not prescriptive, every effort should be made to ensure they are flexible and clear to understand.

Whilst the criteria for population density and proximity to military activities need greater assurances, the other criteria are more goal setting in their nature which allows for a wide range of ways to meet them. This in turn promotes greater innovation and we welcome the consistent approaches to regulation across the UK.

Question 5:

The government currently plans to retain the Semi-Urban Population Density Criterion in EN-7. Please indicate the extent to which you agree or disagree with the inclusion:

STRONGLY AGREE

Question 5a (OPTIONAL): If you would like to explain your response, please use the text box (free text, 150 words)

Whilst we agree with government plans to retain the Semi-Urban Population Density Criterion in EN-7 there are examples whereby reassessment could be necessary based on the locations of high energy consumers. Certain technological developments like data centres require massive amounts of energy for their operations and if these are built in urban locations, they will need massive amounts of energy provisions from a local provider. SMRs/AMRs are the only current technology that can facilitate this sustainably and at the required scale, therefore, they will need to be co-located with these high energy consumers. If SMRs/AMRs can prove they are intrinsically safe and do not pose any offsite risks, it will be important to review the semi-urban population criteria to ensure that high energy technical developments such as Data centres are not being restricted. If this is the case the Semi-Urban Population Density Criterion will need to be updated to ensure new technologies are able to develop in semi-urban areas.

Question 6:

We are open to revising the Semi-Urban Population Density Criterion in the future. How should this criterion change in the future to better support the deployment of advanced nuclear technologies, and what evidence supports your suggestion? Please reference your sources. Please use the text box to answer (free text, max 500 words).

Question 6

In the future there should be a periodic review of the available evidence to support a change to the risk profile of SMRs. Whilst it is understandable for the first SMRs built in the UK to be in a non-urban environment, data that can be gathered from the rural or semi-urban locations, it can then inform the future risk profile of these technologies. This is particularly the case if SMR's can demonstrate that they are intrinsically safe and prove that there are no offsite risks in the event of a catastrophic failure. China's Shidao Bay site in Rongcheng, has proven successfully that two units of the 200-MWe high-temperature modular pebble bed (HTR-PM) successfully achieved inherent safety during loss-of-cooling tests¹. If this technology is proven to be effective in the UK, then the semi-urban criteria should be reviewed as it is no longer relevant to all the NPP's within its scope. It would be more valuable

¹ [Nuclear Milestone: China's HTR-PM Demonstrates Inherent Safety](#)

to maintain the NPP and Semi-urban population density criteria as an overarching policy development regime, but input subsections that reduces the criteria for technology that can demonstrate they are inherently safe. This would ease planning applications and help aid the speed of development. Future revisions to both the NPP and semi-urban population density criteria should mirror previous modifications to nuclear policy developments, such as the Nuclear Fusion policy statement which makes similar concessions to advanced technologies².

Great British Nuclear (GBN) will strengthen these policy statements, but they currently lack a clear definition and purpose. This prevents GBN from engaging, developing, communicating and convincing the wider public that these technologies are vital to Britain's energy supply. GBN should be able to provide the public with high quality information from a reliable source. Reforms to GBN will be vital in addressing these concerns and ensuring future nuclear energy developments.

Question 7:

If it's not already addressed elsewhere (for example in EN-1 and the Planning Inspectorate Nationally Significant Infrastructure Project Guidance), are there any specific areas of the draft EN-7 where further clarity or guidance is needed to help ensure successful implementation by developers, planners, and regulators?

YES

Question 7a (OPTIONAL): If you would like to explain your response, please use the text box (free text, max 150 words)

The technical consideration "Access to Transmission Infrastructure" is incomplete as whilst it refers to "energy" it infers electricity transmission infrastructure and neglects infrastructure for transmission of heat, hydrogen and other potential products. Furthermore, the reference in the response document regarding road transport for hydrogen (3.8.4) does not seem practicable considering the very large quantities of hydrogen which could be produced and the inherent risks of transporting hydrogen on the roads. It would be more beneficial if hydrogen production sites were connected to a hydrogen distribution network or be located at a port where suitable vessels can distribute the hydrogen by sea.

Question 8:

Would additional support or information from the government be beneficial and assist developers intending to apply for Development Consent in implementing EN-7 and proceeding through the Development Consent Order pre-application process?

² [New National Policy Statement for fusion energy: proposed approach to siting fusion energy facilities](#)

YES

Question 8a (OPTIONAL): If you would like to explain your response, please use the text box (free text, max 150 words)

It would be beneficial for government to facilitate the environmental knowledge retained with the regulatory bodies to a database for developers, as this would speed up decision making and regulatory applications. This would help to aid applicants proceeding through the Development Consent Order pre-application process as it allows for a streamlined approach that can save time. This is particularly important for cases where SMRs or AMRs may be co-deployed alongside other infrastructure, e.g. for industrial, hydrogen generation, powering data centres, and on a much smaller scale than has been done in the UK.