

Department for Energy Security and Net Zero consultation: Alternative Routes to Market for New Nuclear Projects

1. Context to this consultation response

- 1.1 South Gloucestershire Council hosts the 150ha NPS EN-6 site at Oldbury on Severn.
- 1.2 This Council is an active participant in the Western Gateway led Severn Edge initiative (that includes both the Oldbury and Berkeley sites) and is aware of technology promoter interest in sites both Oldbury and Berkeley and potentially from Great British Nuclear for the deployment of smaller scale nuclear technologies. To inform such engagement Western Gateway has developed a Vision¹ for Severn Edge that acknowledges the designation of the site at Oldbury for new nuclear development, its potential to contribute to net zero.

2. Consultation on the Alternative Routes to Market for New Nuclear Projects

- 2.1 This consultation is welcomed in promoting smaller nuclear technologies to come to market.
- 2.2 In accordance with the South Gloucestershire Constitution in respect of Government consultations, this is a delegated Officer response submitted following consultation with relevant Executive and Local Members. It will be published on the National Infrastructure Project page of the South Gloucestershire website.

3.1 South Gloucestershire Council consultation response

3.2 General Comments

- 3.2.1 South Gloucestershire Council as host Council for the National Policy Statement EN-6 designated nuclear new build site at Oldbury and the existing Nuclear Reclamation Services (NRS formerly Magnox) power station, acknowledges
 - the potential that nuclear power generation has to play in meeting the UK's energy needs in combination with renewables, and the
 - potential that high quality nuclear development has to bring significant education, training, skills, employment, supply chain and biodiversity net gain opportunities to our area.

¹ [Severn Edge | Western Gateway \(western-gateway.co.uk\)](https://www.western-gateway.co.uk)

This is reflected in our adopted and emerging Local Plan policies as well as in the Western Gateway led Severn Edge Vision (see link below).

- 3.2.2 It is also acknowledged that some of the smaller ANTs have the potential to deliver significant local benefits with lower levels of disruption, burden and disturbance that may be caused by GW scale power station construction. This consultation on these smaller technologies is therefore welcomed.
- 3.2.3 The experience of this Council in working with fellow organisations on the Western Gateway Severn Edge (Oldbury and Berkeley) initiative, not only through participation in the UKAEA Fusion site selection process and engagement with other technology promoters has shown the benefits of transparency and early engagement with local communities and Councils on proposed technologies and siting. Forging positive working relationships and mutual understanding not only of project promoter technologies but also of local needs, priorities and plans has the potential to ensure alignment of objectives and ensure that potential problems are designed out or mitigations or benefits designed in from an early stage and in streamlining consenting and regulatory processes.
- 3.2.4 It is recommended therefore that the Government and Great British Nuclear approach to new nuclear technologies builds in a requirement for early engagement with host communities and Councils.
- 3.2.5 Related to this, it is strongly recommended that Government build into the proposals for all scales of new nuclear development the need for community benefits for communities that host new nuclear power generation on behalf of the nation. This principle is already accepted for other energy generation technologies such as solar and wind, as well as for areas that host radioactive waste disposal facilities. New nuclear should be aligned with this.

3.3 Responses to the questions posed

In some cases a single response relates to a group of questions.

Question 1: *Are there any uses for nuclear energy (beyond those in this document) that you believe government should be considering? If yes, please explain what they are.*

Question 3: *To what extent do you agree that advanced nuclear could be a valuable energy source for large scale industry. Please provide an explanation for your response.*

Question 5: *To what extent do you agree that advanced nuclear could be a valuable energy source for hydrogen and synthetic fuel production? Please explain your answer*

Question 6: *To what extent do you agree government should explore the opportunity of using nuclear plants to provide district heating to help decarbonise our domestic and commercial buildings? Please provide an explanation and include suggestions on mitigating any potential barriers*

Question 4: *In your opinion, what further measures should government take to enable industrial applications of advanced nuclear? Please provide an explanation of the type of support required.*

Through Severn Edge engagement with a number of technology promoters we are aware of the potential uses listed, as well as the potential for ANTs as an energy source for large scale industry. We have no further suggestions to add.

We are aware that ANTs have the potential to directly power e.g. hydrogen and synthetic fuel manufacture without the inefficiencies of going via the grid, as is the use of heat to power heat grids. The potential of such uses to contribute to decarbonisation and efficient use of energy is recognised and these applications. Government initiatives to encourage the development of ANTs is therefore encouraged.

Given the timeframes for the development, appropriate regulation and deployment of new nuclear technologies, rapid progress is required. However, progress must go hand in hand with rigorous regulation to ensure public and environmental safety, transparency of process and openness to public scrutiny. (see response to Q8 below)

Question 2: *To what extent do you agree that advanced nuclear can be a valuable energy source when combined with a Thermal Energy Storage System or for co-generation? Please provide an explanation for your response.*

This Council does not have the technical expertise to answer this question. However flexible energy generation is key to achieving best fit with the variability of renewable energy generation and is to be encouraged.

Question 8: *To what extent do you agree that the current regulatory pathways cover new uses? Are there any areas that are not covered? Please explain your answer.*

Question 9: *What, if any, are the main opportunities and challenges for streamlining regulation while maintaining high standards of safety, security and environmental protection? Please explain your answer.*

It is agreed that regulation is a critical enabler of new nuclear projects. It is imperative for public and environmental safety and to ensure public confidence that appropriate, clear and transparent regulation must be in place for ALL nuclear technologies throughout their lifecycle, including for any wastes arising during operation and the whole decommissioning process.

We are aware that some technologies are proposing not to go through the established and publicly transparent Generic Design Assessment process. This raises potential concerns for host communities, as whatever the route, safety and transparency must be ensured for all nuclear technologies. As regulation is part of the route by which new technologies will come to market, it is imperative that proposals provide clarity and certainty as to how all ANTs will be regulated in an open and transparent way, including ensuring opportunities for public scrutiny.

Smarter regulation must not be at the expense of public scrutiny, and transparency of process so that host communities that host nuclear power generation on behalf of the nation can have the confidence that they do so safely.

Question 10: *Following government's streamlining work to date, do you agree the next phase should focus on improving the efficiency of existing processes? Please explain your answer.*

Question 11: *To what extent do you agree that advanced nuclear technologies and new uses of nuclear are accommodated within the existing legal landscape? Please explain your answer.*

To ensure the delivery of high-quality development that maximises benefits and minimises impacts on host communities and environments across the many years of operation and then decommissioning, it is imperative that any changes to the consenting regime for all scales of new nuclear power generation ensure rigorous assessment, review and examination of proposals prior to any consents being granted and review mechanisms thereafter to respond to change.

Engagement with host and nearby Local Authorities must be required from the outset. Better use of the pre-application process should be made, to ensure that project promoters work with host communities and Councils to iron out difficulties, design out legitimate concerns and build in appropriate mitigation. It is observed that some project promoters do the minimum and do not take points raised seriously until the DCO Examination leads them to do so. A consequence is that the Examination and post examination periods have lengthened and the statutory 6-month timeframe for a decision is breached.

As suggested previously in respect of NSIP reforms, the PINs should have a role to play early on in the pre-application process – not just in respect of advice on process, but also identifying key issues and providing guidance on what may or may not be acceptable in terms of proposals to address those issues. This could significantly improve efficiency of process without loss of transparency and the opportunity for public scrutiny.

The parallel or sequential processes of consenting and permitting can be very complex and confusing at all stages of Nationally Significant Infrastructure consenting and also during project delivery. It is suggested that Government consider what can be done to bring these processes together.

Question 12: *What are the opportunities and the challenges of the proposed engagement approach? Please explain your answer.*

As a host Council for the designated EN-6 site at Oldbury, and therefore having a key interest in ensuring the safety of any technology proposed for deployment in our area, we suggest that early engagement with regulators should be compulsory and not optional.

It is unclear from the steps set out in the paper – one day engagement, multi-day Technical Engagement and Preliminary Design Review, what opportunity there will be for the public, host councils or other interested or concerned parties to submit questions / concerns and receive answers.

The current GDA process includes an open invitation for interested parties to submit questions at an early stage, as this Council has done. This ensures that interested and concerned parties are able to feed in their questions and concerns and receive answers or assurances early on in the process. It is important for public confidence that any new system builds in transparency and the opportunity for public scrutiny from the outset. Without this there is the potential not only for concerns not to inform scheme design but also for public confidence to be undermined.

There is also significant value in the current NRS Site Stakeholder Group arrangements, whereby the public and local organisations can continue to scrutinise

and receive updates and answers to questions throughout the operational and decommissioning phases of nuclear power stations. It is recommended that similar mechanisms are required in for all scales of new nuclear development.

Question 13: *Are there new or additional nuclear safeguard challenges associated with ANT innovation and/or new uses of nuclear energy? Please explain your answer.*

This Council does not have the technical expertise to answer this question. However we fully support the requirement that developers of ANTs plan from the outset how they will manage and dispose of spent fuel and radioactive waste from their technologies.

We strongly suggest that minimisation of the quantity and radioactivity of the spent fuel and waste arising, and the timeframe that such material remains on site. Also that project promoters should also be required to demonstrate how any other hazardous waste is minimised, managed and disposed of.

Question 14: *What else should government do to ensure that new nuclear projects can be brought to market? Please explain your answer.*

We understand that Great British Nuclear is working on siting for SMRs, but are puzzled by the potential divide between Small and Advanced Modular Reactors

In the interests of aligning national and local priorities, and matching technology needs with local expertise, skills and needs and needs it is strongly suggested that GBN engages with host Councils and communities early on any siting considerations or strategy. Collaboration and alignment from an early stage can help secure a smooth route to deployment.

Question 15: *What, if any, structures do you think are appropriate for advanced nuclear technologies? Please explain your answer.*

Question 16: *What are some key areas government should consider in a potential business model to bring a first-of-a-kind project to market? Please explain your answer.*

Question 17: *How do you think the support required for projects should differ for later, nth-of-a-kind projects compared with a first-of-a-kind project? Please explain your answer*

These questions are outside the experience of this Council.

Question 18: *What financial risks sit with government and cannot be transferred to private actors? What is the minimum protection that government will need to provide to mitigate financial risks to taxpayers? Please explain your answer.*

Question 19: *How should government mitigate insolvency risk at privately funded nuclear plants? How can this be achieved without imposing undue costs on taxpayers? Please explain your answer.*

Question 20: *What support infrastructure, or other enablers, would help bring projects to market, in addition to those highlighted above, should government introduce to help private developers bring projects to market? Please explain your answer*

Question 21: *To what extent do you agree that government will always need to put measures in place to protect citizens, consumers, and taxpayers, even where a nuclear project is entirely privately financed? Please explain your answer.*

Question 22: *To what extent do you think companies wishing to negotiate with government should be tested against suitability criteria before entering negotiations? Please explain your answer.*

Question 23: *What do you think the criteria should be to warrant entering negotiations with government? Please explain your answer.*

While it is beyond the experience of this Council to have a view on how financial risks are mitigated, we would like to stress the requirement that the safety and security of nuclear development is transparently and demonstrably assured throughout the lifecycle of a nuclear power generation plant and that no costs whatsoever fall to host Councils.

Question 21: *To what extent do you agree that government will always need to put measures in place to protect citizens, consumers, and taxpayers, even where a nuclear project is entirely privately financed? Please explain your answer.*

Question 22: *To what extent do you think companies wishing to negotiate with government should be tested against suitability criteria before entering negotiations? Please explain your answer.*

Question 23: *What do you think the criteria should be to warrant entering negotiations with government? Please explain your answer.*

We are aware that there are a wide range of nuclear technology promoters emerging to promote their wares – from adaptations of existing technologies by well known companies to smaller ‘market disrupters’ with novel technologies.

Given the sensitive nature of nuclear development, and the risks that could potentially arise without appropriate control, we agree that Government will always need to put in place measures to protect citizens, consumers and taxpayers regardless of the financing regime for a project.

We agree further agree that it is imperative that systems and criteria are in place to ensure that only suitable organisations come anywhere near the delivery of nuclear technologies, along with rigorous, robust and transparent regulation, consenting, monitoring throughout the lifecycle of a nuclear power plant. This is vital to ensure safety, security, minimisation of risk and public confidence, as well as providing reassurance for host communities both during the planning stages, during operation and through to and including decommissioning.

Question 24: *What further steps should government take to support R&D for Advanced Nuclear Technologies? Please explain your answer*

Question 25: *To what extent do you agree that there are current or future gaps or constraints in the UK R&D landscape for Advanced Nuclear Technologies, either for that high TRL R&D and demonstration or earlier stage R&D? Please explain your answer.*

Question 26: *To what extent do you agree that there are current or future gaps or constraints in the UK supply chain for Advanced Nuclear Technologies? Please explain your answer*

This Council does not have the relevant experience to be able to answer these questions.

If there are any questions regarding this consultation response please contact the author or alternatively Jon Severs jon.severs@southglos.gov.uk .

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