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To: [SizewellC](#)
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Subject: SZC - ONR Written Representation to PINS - April 2021
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Dear Sir/Madam

ONR supplied an initial written representation concerning the Sizewell C project to the Planning Inspectorate on 21st July 2020. In that representation ONR undertook to supply a more detailed representation at a later date. This representation is attached.

Yours sincerely

N. Cooper
Site licensing Specialist
Office for Nuclear Regulation

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Examination of an application for Development Consent for the Sizewell C Project

Written Representation from the Office for Nuclear Regulation (ONR)

Nuclear Site Licensing

On 30th June 2020, NNB GenCo (SZC) Limited ('NNB GenCo') applied to ONR for a nuclear site licence to permit the construction and operation of two EPR™ reactors at the Sizewell C (SZC) site. As noted in relevant representation RR-0911 ONR is currently assessing this application and expect to be able to grant a licence, subject to the successful completion of our assessment, by mid-2022.

As part of its assessment of a site licence application, a key element of ONR's consideration is the suitability of the site. In conformity with our published guidance (*Licensing Nuclear Installations*)¹, before a nuclear site licence is granted the prospective licensee will need to satisfy ONR that:

- the proposal conforms with Government siting policy.
- the location is suitable for the establishment and maintenance of an adequate emergency plan during all phases of the power station.
- the proposed nuclear power station is capable of being designed to have robust defences against the site-specific external hazards.

To demonstrate that the SZC site is suitable, NNB GenCo submitted to ONR a Justification of Site Suitability Report (JSSR) to support its site licence application, with a final version of the document expected in mid-2021. The purpose of the JSSR is to address the topic of site suitability identified in ONR's licensing guidance. The JSSR aims to justify the suitability of the site by summarising the evidence that substantiates against six claims:

1. the site is of a sufficient size to accommodate all necessary systems to ensure safe operation
2. the site can be connected to electricity grid supplies.
3. adequate cooling capability can be provided for all normal and fault conditions.
4. there are no external hazards that would preclude the use of the site (including the external hazards presented by SZB to SZC).
5. the geology of the site will provide a secure long-term support to the necessary structures, systems, and components.
6. operations on the SZC site will not adversely affect the ability to maintain an adequate Safety Case for the adjoining Nuclear Licensed Site (SZB).

NNB GenCo's site licence application also includes a Site Data Summary Report (SDSR) that supports the JSSR and whose overall purpose is to summarise the site specific external hazards characterisation (in terms of magnitude and associated return periods / frequency of each external hazard), and to identify a suitable Design Basis for each external hazard applicable to the SZC site. The final version of the SDSR is expected to be provided to ONR around mid-2021, and it is this version that will inform our licensing assessment.

Current position relating to ONR's site suitability work

Government siting policy/ demographics

In relation to the siting of nuclear installations adjacent to existing populations and residential developments etc., the UK Government policy is to make use of the "semi-urban"

¹ Licensing Nuclear Installations. www.onr.org.uk/licensing-nuclear-installations.pdf

demographics criterion as the limiting values for the siting of modern reactors such as the EPR™ units proposed for the SZC site.

ONR's land use planning team has undertaken a demographics assessment and concluded that the SZC site meets the Government's "semi-urban" criterion. Consequently, ONR does not wish to raise any objections to the grant of a DCO for SZC based on demographics considerations.

Emergency planning

ONR's land use planning team has consulted the local authority (Suffolk County Council) whose area includes the SZC site to obtain assurance that the construction, operation and decommissioning of the power station can be accommodated within their existing off-site emergency planning arrangements (or an amended version).

The Emergency Planner for Suffolk County Council has confirmed that the County Council has not identified any barriers that would prevent the SZC development being incorporated into the existing Sizewell B Radiation (Emergency, Preparedness and Public Information) Regulations 2019 (REPP19) off-site emergency arrangements.

Consequently, ONR has no objection to the grant of a DCO for SZC based on emergency planning considerations

However, as the regulator for REPP19 on nuclear sites, ONR agrees in principle to the inclusion of the two DCO conditions requested by Suffolk County Council (not withstanding legal improvements to the wording), subject to an amendment (shown in bold) to condition 1:

- 1. No part of the works covered by the DCO shall commence until emergency plans relating to the construction **of that part of the works** have been agreed and issued. Nuclear emergency plans cover the EDF Energy Sizewell B Operators emergency plan and the Suffolk County Council Off Site Emergency Plan issued under Radiation (Emergency Preparedness and Public Information) Regulations 2019. Wider civil contingency arrangements include Suffolk Resilience Forum emergency plans for identified risks issued under the Civil Contingencies Act 2004 that might affect the Sizewell C main development site and any associated infrastructure; and*
- 2. The emergency plans shall be carried out as approved in relation to the relevant part of the relevant works, unless otherwise agreed after consultation through the Sizewell Emergency Planning Consultative Committee or Suffolk Resilience Forum as appropriate.*

The suggested ONR amendment reflects that SZC construction will proceed in stages. As initially written condition 1 may be interpreted as meaning plans for later stages of the project need to be in place before earlier stages begin.

External Hazards

Flood risk

ONR is broadly content with the strategy that NNB GenCo is developing for the nuclear flood safety case, and its consistency with its Flood Risk Assessment for DCO. External flooding hazard characterisation, including rainfall forecast and coastal flooding hazard characterisation is being assessed as part of ONR's nuclear site licence assessment. No major issues have been identified at present.

Proximity to civil aircraft movements

The aircraft crash hazard will be assessed as part of ONR's nuclear site licence assessment. Currently, no significant issues have been identified.

Seismic risk (vibratory ground motion)

Assessment of the seismic hazard is part of ONR's nuclear site licence assessment. ONR is engaging with NNB GenCo in relation to the seismic vibratory ground motion hazard for the SZC site and the Company's approach to define the design basis earthquake.

Capable faulting

From the evidence reviewed to date, ONR is broadly satisfied that capable faulting does not pose a significant risk to the SZC site.

Meteorological conditions

At present, ONR foresees no significant issues arising from meteorological hazards for the SZC site.

Proximity to mining, drilling and other underground operations

ONR has not been informed of any proposals to perform underground operations (including mining and drilling) in proximity to the SZC site (apart from those required during construction of the plant) and is not aware of any mineral resources that could lead to future proposals.

Additional matters related to National Policy Statements for Nuclear Power

Water quality and resources

ONR's interests are restricted to the engineering aspects of supplying cooling water to the nuclear safety systems and the effects that the proposed development (marine structures) could have on nuclear safety. ONR's assessments remain on-going.

Access to transmission infrastructure

Secure and reliable access of SZC to the grid system is being considered by ONR in its licensing assessment. No significant issues have been identified by ONR at this time.

Effects on other significant infrastructure

ONR's interest is limited to the impact that SZC construction could have on the safety of the adjacent Sizewell B site, for instance the effects of dewatering the SZC construction site. This is addressed in NNB GenCo's Justification of Site Suitability Report, which is being considered by ONR in its nuclear site licence assessment.

Size of site to accommodate construction, operation and decommissioning

This is being considered as part of ONR's nuclear site licence assessment.

Non-seismic ground conditions

Significant local geological and groundwater characterisation work has been undertaken since prior to the construction of the Sizewell A station in the 1950s. More recent investigations have been carried out on behalf of NNB GenCo specifically to characterise the conditions at the SZC sites. The results from these investigations will be considered by ONR as part of the nuclear site licence assessment.

Concluding Remarks

Although our site licence assessments are ongoing, we have not so far identified any shortcomings that might prevent the grant of a nuclear site licence to NNB GenCo in due course, or to subsequently permit the commencement of nuclear construction.

We will be happy to provide PINS, on request, a further update on progress with our site licensing assessment at any stage in the Examination period.

Office for Nuclear Regulation

April 2021