

Sizewell C – Direct Consent Order ('DCO')

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Response to the request by the Secretary of State ('SoS') for comments on submissions by Parties to SoS questions of 18 March 2022

Submissions in response to SoS Questions of 18 March

The following comprises my comments on the DCO Applicant, SZC Co, submission in reply to the SoS questions of 18 March

1. Water Supply, Desalination Plant and Drainage

A. Question 3.1/3.2 abbreviated – *The Secretary of State notes that at the end of the Examination, the Applicant was unable to demonstrate that they had secured a permanent water supply for the proposed Development. The Applicant should therefore provide information that sets out the progress that has been made in terms of securing a permanent water supply solution*

- i. The Applicant's response to the SoS questions can be succinctly summarised as no progress as there is no secure water supply solution that has been fully developed, assessed for environmental compliance and impact and approved by the water supplier Northumberland Water Limited ('NWL') and Regulators.
- ii. For over ten years the Applicant has been engaged in the preparation of scheme for Sizewell C, in particular latterly for the DCO, and the matter of water supply, both temporary for construction purposes and permanent for operation of the proposed facility has failed to be addressed despite the criticality of water supply. This matter has been raised throughout by various Interested Parties. The Applicant has failed during this extensive period to make adequate or substantive advance arrangements via the local water supplier Northumberland Water Limited ('NWL') to secure a water supply, even for construction, by its proposed construction start date of 2023. The fact that it was only in the latter part of the DCO Examination that the Applicant submitted details of a temporary water supply for construction via a desalination plant shows the lack of a properly planned approach and raises questions as to the adequacy of the Applicant project management that such a critical feature element has been so inadequately addressed.
- iii. NWL's current Water Resources Management Plan ('WRMP') August 2019 for East Suffolk Water states "*Our view is that there is still significant uncertainty regarding the Sizewell C construction start date and as such it would be wrong to include it in our final plan now.*" NWL did state that

based on a maximum demand requirement of 2ML/d (2 million litres/day) it had assessed its ability to supply and stated *“The scenario testing shows that there would be a supply deficit and so a new supply would be required”*. NWL further stated the Applicant (referred to therein as EDF) would have to fund the new water supply. Since that time the Applicant has increased its water requirement to an average of 2.3ML/d, with a peak requirement of 2.8ML/d which is puzzling as the design of the EDF PWR reactor has to my knowledge not changed since 2019.

- iv. Further, the Applicant is dependent on Northumberland Water Limited(‘NWL’) on securing a supply via Sections 55 and 56 of the Water Industry Act 1991 (‘WIA’) which I understand a reasonable endeavours obligation and not a statutory obligation to supply.
- v. NWL’s five yearly Water Resources Management Plan update is due for submission in 2024 and is in its early stages of preparation. I understand no definitive proposals exist as to whether NWL will provide a permanent water supply for Sizewell C. Further, as stated above, the required demand now well exceeds that which the Applicant advised to NWL for its 2019 WRMP.
- vi. The Applicant has indicated that it wishes to commence the construction of Sizewell C in 2023. This means construction will start and substantial costs will be incurred with no certainty that there will be a permanent water supply, whether via NWL or by the Applicant.
- vii. I consider it unreasonable for the Applicant to state in §2.1.15 of its response *“This background should provide more than sufficient comfort both for SZC Co., but also for the Secretary of State, that NWL will be in accordance with the statutory scheme plan to deliver the required infrastructure (so far as is possible) to provide a long-term supply to SZC”*. Further, in my view, it is unreasonable to further state in §2.1.19 that *“SZC Co. can reasonably expect that NWL will deliver the required infrastructure as the relevant demand is now included within the current draft WRMP”*. That the demand is included but it does not, in my view, confer certainty of supply.
- viii. The Applicant concedes that point as in §2.1.20 it states *“If it were to become apparent that there was any risk of NWL being unable to provide the supply, there are a range of actions open to SZC Co (see further below).”*
- ix. To summarise I contend there is no certainty that such a supply will be available and thus no comfort is provided that monies spent by government to advance this project, if DCO approval is given, will gain a recovery or that an operational plant will be feasible.

B. Question 3.3 The Applicant should confirm if it would be possible for the proposed temporary desalination plant to permanently meet the full water supply

demand for the lifetime of the proposed Development should no alternative water supply solution be identified.

- i. The Applicant answer is no but this is only eventually conceded by it in its fifth paragraph §2.2.5
- ii. The Applicant raises here the necessity of a permanent desalination plant if NWL is unable/unwilling to provide the water supply crucial to the operation of Sizewell C.
- iii. The Applicant's preliminary considerations are outlined in §2.2.6. It states that the desalination plant will be located on, or adjacent to, the nuclear platform for Sizewell C as it refers to new outfalls/intakes and/or altered DCO presented outfalls and intakes. The Applicant also refers in §2.2.5 to "*likely...standby desalination capability within the plant to maintain security of supply during maintenance periods*". The plant here refers to the desalination facility.
- iv. The Applicant and Interested Parties are aware of the tight constraints of the area of land that Sizewell C facilities sit upon. As a chartered engineer I consider it likely that there will be considerable difficulty in locating additional infrastructure of this nature in such a constrained site without significant alteration to other facilities, assuming that is even feasible. The Applicant has neither demonstrated that it is feasible nor shown the layout of any reconfiguration of the main site from that presented to and proposed for permitting by the DCO process. I note the Applicant is proposing in §2.2.9 to locate these permanent desalination facilities either underground north-west of the SSSI crossing, i.e. off the area within the DCO for permanent development or on a part of Sizewell A which would increase traffic along the current road to Sizewell A and B. This former will require substantive earthworks and other engineering works e.g. contiguous bored pile walls as I believe it will be below the groundwater table, the latter's impact has not been assessed in the DCO.
- v. I also contend that the location of such critical supply plant immediately adjacent to the rest of the Sizewell C main site development or other active nuclear facilities, such as Sizewell B, poses unacceptable risks in case of fire or other incidents to elements of the plant. Such a facility should be sufficiently remote from the site to minimise such risks and any standby back up facility should be remote from the main facility for the same reason. For surety of supply I further contend that a standby facility should be as independent as possible and a surface reservoir fed by natural springs would provide such surety. The Applicant has failed to consider all viable and sensible options further demonstrating its lack of adequate and timely project management – a crucial failing with such a large infrastructure facility.
- vi. In §2.2.8 the Applicant concedes it has not completed a detailed environment assessment of such a scheme despite it having all relevant base data to do so. I believe it is likely this is due to proposals for a permanent salination plant being so underdeveloped that detailed

assessment at this time is impossible. The Applicant's attempts to conclude, without any assessment or even limited justification statements, that a permanent desalination plant will "*be unlikely to generate any materially new or materially different significant environmental effects*" and that "*the marine environmental impact of connecting the desalination plant discharge into the cooling water discharge is likely to be insignificant*", the latter on the sole basis of saline discharge rather than total discharge composition of such a facility. This is unreasonable, as, if considered acceptable to allow the DCO to be approved, it would question the need for any detailed assessment of essential subsidiary plant to nationally important projects.

- vii. Whilst the Applicant states in §2.2.11 that it has spoken to ONR about "*a bespoke permanent desalination plant*", salient details to confirm acceptability have clearly not been able to be provided to give surety that such solution will be acceptable to ONR prior to DCO approval and construction commencement.
- viii. **In summary I do not agree with the Applicant's §2.2.11 that "*the Secretary of State can be satisfied that there is no in principle difficulty regarding a permanent desalination supply*"**

C. [Question 3.4: The information provided should be sufficiently detailed to enable the Secretary of State to understand and reach a reasoned conclusion on the cumulative environmental effects, including for Habitats Regulations purposes, of the different permanent water supply solutions.](#)

- i. The simple answer is the Applicant has not provided sufficient detail to enable the SoS to understand and reach a reasoned conclusion, as eventually conceded by the Applicant in its third paragraph §2.3.3
- ii. In my view the Applicant in §2.3.6 tries to circumvent the SoS requirement by providing what it considers is case law to support the SoS reaching a conclusion without such detail. I believe the case is not comparable and thus case law precedent does not apply. Additionally the Applicant is only using this to support a permanent solution as provided by NWL not its own permanent desalination plant as effectively stated in §2.3.10.
- iii. The case relates to two linked but separate projects, the main assessment being done on the first project, but the case law refers to "***The ES for the first project should contain appropriate data on likely significant cumulative impacts arising from the first and second projects to the level which an applicant could reasonably be required to provide, having regard to current knowledge and methods of assessment***" (my highlight). That is clearly not the case for the permanent water supply for Sizewell C as the DCO application does not contain appropriate data on likely significant cumulative impacts arising from any, as yet, determined NWL development. Further if one takes an Applicant

developed permanent desalination plant as the second project, that similarly is undefined at this time.

2. Traffic and Transport

A. *Question 4.1 The Applicant should advise as to whether or not they consider that a control mechanism(s) could secure the delivery of the Sizewell Link Road and Two Village Bypass in advance of the commencement of Phase 1 works on the Main Development Site*

- a) The Applicant implies in §3.1.12 and 3.1.13 that the SoS request for the SLR and TVB to be delivered before Phase 1 of the Main Development Site will incur a delay of 2 years or greater and thereby additional costs.
- b) Phase 1 works comprise Site Establishment and Preparation for Earthworks and is shown in REP10-025 as commencing in January 2023. The SLR and TVB are shown as commencing at the same time with a 2-year construction programme. As a chartered geotechnical engineer and Fellow of the Institution of Highways and Transportation with over 40 years' experience in highway construction in East Suffolk, that the latter period can be considerably shortened to probably 12 months. Such acceleration was achieved by my colleagues and I with minor design changes performed at very short notice on a major part of the A14 (then A45) Ipswich Bypass in the 1980's when it became apparent to the then Department of Transport Eastern region office that the Orwell Bridge construction would otherwise be completed before road links were present. Thus I contend delay can be reduced to one year or even less as the SLR and TVB are significantly smaller scheme to the grade separated A14 particularly as the Applicant is already delayed on the Main Development Site with its geotechnical trials for crucial elements of Phase 1/2 yet to commence.
- c) The Applicant under subsection c) of its response entitled Practical Difficulties refers in §3.1.29 to the SLR being delivered in parallel with the Main Development site to *"optimise sustainability, delivery and efficiency"* and in §3.1.30 to *"not exporting any natural/inert excavated material off-site as waste and an aim to make use of all suitable site won material as fill within the Main Development Site thereby also minimising the need for imported fill aggregate"*.
- d) The Applicant further states in §3.1.33 that this is because *"site won material from the SLR and the TVB on the Main Development Site, circa 140,000m³ of surplus material will be diverted from off-site disposal to on-site reuse"*.
- e) In my view It is entirely feasible for the site won material to be temporarily stockpiled for re-use off the Main Development Site. As the Applicant is already intending for it to be temporarily stockpiled for re-use on the Main Development Site, see extract from §3.1.33 above, there is no clear sustainability argument which precludes the SLR and TVB being built prior to Phase 1 works on the Main Development site or any requirement

for additional HGV movements. In both instances double handling is required.