Together Against Sizewell C

Deadline 10 Submission TASC IP no. 20026424

TASC comments on ExQ3 responses submitted at deadline 8

AI.3.1 Question to the Applicant

Applicant's answer is set out in REP8-116

TASC comment:-

SZC Co refer to the EPR being an evolutionary design and being sufficiently mature. However, as stated many times previously, there are no working EPRs in Europe and of the two built in China, we understand that the design had to be simplified to enable the reactors to be operational, resulting in them operating at a reduced level than that proposed. Further, one of the EPRs in China has recently been switched off for safety reasons. Of the European EPR projects being built, construction of Olkiluoto began in 2005 and Flamanville 2007, neither of which are yet operational. Hinkley C is also behind schedule, and the pandemic has added to these delays. TASC say that there is no reason why a First of a Kind of a different design is likely to take longer to deploy than Olkiluoto or Flamanville. TASC also contest the statement regarding the evolutionary design of SZC. As a replica of HPC, SZC has not been defined by its location in an AONB but would exist in contrast to it.

With regard to the SZC project being too large for the size of the site, when Sizewell C was first nominated its size was 31 hectares [see para 15(b) TASC doc. REP5-296] but, at the expense of the Sizewell Marshes SSSI, it is now 33 hectares, presumably in order to accommodate the HPC EPR design. TASC would remind the ExA that EN6 Vol II at para C.8.89 states *"Nominators have indicated that in their view the size of site required for the operation of a permanent site of a single* [emphasis added] *nuclear power unit allowing for operation, maintenance, storage of spent fuel and intermediate level waste would be between 30 to 50 hectares. The Office for Nuclear Regulation concur with this estimate".* TASC consider it is beyond credibility to suggest that a site of 31 hectares was envisaged to accommodate the two reactors now proposed, given the agreed space requirements per reactor.

AI.3.2 Question to the Applicant

Applicant's answer is set out in REP8-116

TASC comment:-

The Applicant refers to managed adaption of the HCDF planned to accommodate the consequences of rising sea levels and increased storm surges resulting from the impacts of climate change. If the Applicant is planning managed adaptation even before Sizewell C is being constructed, it surely points to the fact that it should not be built. The Applicant accuses Professor Blowers of providing no evidence and is only using his own judgement when he says *'the impacts of CC [climate change] on SLR [sea level rise], storm surges and coastal processes could render the Sizewell site unviable and threaten the decommissioning process and the security of interim stores'.* However, in contrast, the Applicant provides scant evidence that the site can be kept safe for its full lifetime: the Applicant's

flood risk modelling has been much criticised and, as set out in TASC's comments on Question Al.3.1, only extends to 2140 when protection needs to be provided up to 2190 or beyond. The unpredictability of the impacts of climate change, as stated by Professor Blowers and supported by the IPCC's AR6 report, mean a 'judgement' has to be made, just as the ExA will have to make a judgement when weighing up the risks and dis-benefits of the SZC project as compared with the claimed benefits. Surely the precautionary principle should be applied when, as in the SZC situation, the risks of getting it wrong are so far reaching and potentially disastrous.

The Applicant states, *'The IPCC report does not constitute an evidence base that outweighs that supported by the EA and ONR for the reasons set out above.'* TASC remind the ExA that:

(i) the UK government has ratified the IPCC AR6 report so it should be taken into account when assessing projects,

(ii) the ONR and EA's joint advice note 'Principles for Flood and Coastal Erosion Risk Management' defines, in Appendix A on page 10: *"Full life-time of the station – operational life, plus the time taken for the decommissioning and interim storage of spent fuel and waste, prior to disposal. Again, this should be specified and justified by the operator, but is generally understood to be 160 years* [emphasis added]*."* As the Applicant has not applied this definition when carrying out its FRA, it would seem the Applicant is selective in what guidance from the regulators it follows;

(iii) the ONR and EA's joint guidance 'Use of UK Climate Projections 2018 (UKCP18) Position Statement – November 2020' states on page 3 *'The regulators expect that duty holders in the nuclear industry and operators of sites for radioactive waste disposal will take account of UKCP18 when assessing the impacts of climate change. This includes taking UKCP18 into account at all stages of the facility lifecycle, from design, planning, construction, operation, and through to decommissioning and eventual release from regulation.'* For the same reasons set out above, the Applicant has clearly not followed this regulator guidance.

Ignoring warnings about the ability of nuclear power plants to safely operate due to climate change impacts or that the threats from climate change are underplayed will risk handing an even greater toxic legacy to future generations.

Al.3.3 Question to the Applicant

Applicant's answer is set out in REP8-116

TASC comment:-

TASC fundamentally disagrees with the conclusions drawn by the Applicant in its assessment of the draft EN1. TASC is of the view that new nuclear power is not necessary to achieving the objectives of reaching net zero carbon by 2050 nor meeting projected supply targets. The urgency which the Applicant repeatedly refers to is driven not by the need for nuclear power but by the real crisis presented by the climate extremes brought on by anthropogenic carbon emissions. Net zero carbon can best be achieved not by slow-to-deploy nuclear power which has its own carbon deficit profile which it seeks to hide through the repeated, disingenuous use of 'zero carbon' in reference to nuclear generated electricity, but by driving down demand by a combination of energy efficiency measures, decentralisation of supply, community energy projects, smart grids, a massively ramped up renewables programme and building insulation programmes.

TASC points out that since the Blair statement in 2006 that nuclear power was needed to increase energy security and to meet climate change challenges, no new nuclear has come on

stream in the intervening 15 years; in the unlikely event that Hinkley Point C comes on stream in 2026, it will be a 20 year gap in which we have managed to meet electricity supply without new nuclear build, largely due to conservation measures driving down demand and the growth in renewables. In terms of greenhouse gas emissions, over the most recent ten-year period, temperature adjusted UK territorial greenhouse gas emissions decreased by 27.3%, similar to the fall in actual emissions over this period (32.2%) (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/972583/2020_Provisional_emissions_statistics_report.pdf)

The Applicant's argument that there is an 'absence of a valid alternative policy approach' is presumptuous and incorrect. Option A3 – the 'no nuclear option' – in entirely viable on climate change gases and supply bases but most particularly on the basis of cost. As is widely accepted, the costs of nuclear invariably rise while those of renewables are reducing year on year. Option A3 implies:

• adverse for the achievement of Net Zero due to greater ongoing emissions from unabated gas

• adverse on Security of Supply as reliant on a smaller range of electricity generating technologies

• adverse for the Natural Environment as emphasis on renewables and natural gas with CCS would require larger areas of land and sea to meet the same energy output as EN-1.

While TASC agrees that the unabated use of gas is problematic, it should form a central part of the transitionary programme from fossil fuels to renewables through an urgently pursued programme of insulation, conservation and innovation. It should not be used as an excuse to justify reliance on nuclear power which, across the uranium fuel cycle, has a considerable carbon footprint itself. TASC disagrees with the implication that A3 will lead to adverse effects on security of supply. To the contrary, reliance on the electrical output from 'big nuclear' makes the country vulnerable to outages, planned or unplanned, and creates grid competition with supply from the far cheaper and more flexible renewables sector. As we have seen in the recent past, nuclear's 'on or off' characteristics 'crowd out' cheaper renewables which acts as a disincentive to investment and demands a reduction in output from nuclear to avoid a grid overload. Security of supply is best secured through a diversity of sources, not dominance by one technology nor by one dominant supplier. It is salutary to remember that should a generic fault occur in one of France's 56 reactors which are all largely of similar design, the effect of shutting them all down would be catastrophic. The EPR that the Applicant has aspirations to build at Sizewell does not itself have a particularly shining operational history.

TASC also disagrees with the implication that a 'no nuclear' option would have adverse effects on the natural environment. Firstly, this statement ignores the uranium lifecycle. Millions of acres of land are devoted to the mining of uranium. The process leaves tailing piles which pose health risks. Looking at the mayhem Sizewell C would cause to the East Suffolk environment to endure during the 12+ years of construction, the loss of land, the loss of trees, plants and disturbance caused by the 24/7 light, noise, dust and air pollution, this statement is difficult to comprehend. Nuclear power plants are effectively elaborate poison generating machines which happen to produce lots of electricity. They discharge materials which have largely unexplored and unknown impacts on health and the environment through the air, the sea and on land. The estimated 4,000 tonnes of spent nuclear fuel SZC will generate over its operational lifetime will contain immeasurable quantities of lethal radioactivity requiring containment for a century or more before it is consigned to a deep

geological repository, should that ‘holy grail’ ever be realised. The environmental footprint of that repository will be huge and will require the removal of millions of tonnes of earth and rock down up a depth of up to a kilometre.

There is too much emphasis in government’s NPSs on the supply side of the energy sector rather than on reducing demand. Energy conservation, decentralisation of generation, diversity in sources of supply and the introduction of innovative technologies have the potential to drive down demand significantly. TASC suggests that an energy review which took a realistic and forensic examination of the benefits of demand reduction would reveal that the need for Sizewell C which we are repeatedly told by the Applicant is ‘non-negotiable’ is built on a set of false assumptions. A 100% renewables-driven energy sector is possible and feasible. We do not need nuclear power and we do not need Sizewell C.