THE CASE AGAINST SIZEWELL C

EDF's Sizewell C (SZC) planning application is for two EPR reactors on the fragile Suffolk Heritage Coast. They are not predicted to be generating power until 2034 and would cost £20 billion. We contend that Sizewell C is the wrong project at the wrong time in the wrong place and will not deliver the government's objectives. Our keys points are:

A. Sizewell C does not answer this government's policy imperatives; it is too slow and expensive to deliver urgent CO2 savings and would suck resources away from investment in renewables, such as offshore wind and hydrogen storage. It is unclear how the £20 billion cost would be financed. EDF is pushing for a government stake or for consumers to pay for it through a nuclear tax (the RAB). It cannot be justified as a means to help economic recovery and the location in "blue" Suffolk will not help level up the UK. China's involvement is mired in controversy.

B. Sizewell C would have destructive impacts on the local economy and internationally-protected habitats; any economic benefits it would bring to Suffolk are unproven and overstated, and SZC would damage Suffolk's existing local economy including tourism. The site is at risk from coastal erosion, too small for the project and the project threatens internationally-renowned wildlife reserves. Toxic waste would have to remain on site for centuries.

C. EDF and its EPR have an appalling track record. EPRs are outdated, expensive and beset by technical failings.

A. Sizewell C does not answer this government's policy imperatives

1. **SZC is not the solution for net zero.** By 2034, when SZC *may* be completed, the UK's energy landscape will be profoundly different, favouring cheaper renewables and green hydrogen. EDF admits it will take 6 years for SZC to "pay back" the 5.74 million tonnes of CO2 generated in its construction, ie until 2040. Nuclear is too inflexible to fit well with renewables. Committee on Climate Change Chair Lord Deben describes nuclear as a "transitional" energy source whose need reduces as grid-balancing improves. National Infrastructure Commission Chair John Armitt says "Hopefully by 2025, we will be able to rely on much smarter systems and won't have to rely on nuclear". The NIC said the potential for other non-intermittent technologies to complement renewables "weakened the case for committing to a new fleet of nuclear power stations"**.** EDF's case to generate hydrogen from SZC is weak: the cost of electricity from nuclear for electrolysis is higher than from renewables, and there is no space on the SZC site - nor hard proposals - for hydrogen production to be integrated into the site.

2. **SZC is expensive and will suck resources away from energy innovation:** Every pound invested in SZC could be spent on cheaper, faster renewables, investment in energy efficiency, storage, CCS, tidal and vital flexibility adaptations to the grid plus efficiency adaptations to our homes. The Prime Minister's target for offshore wind capacity to reach 40GW by 2030 has been estimated to cost £50bn, but for 30GW - the equivalent of nine SZCs (@3.2GW) - this looks good value, especially the power could deploy some years ahead of SZC.

3. **SZC is not competitive and dependent on a "nuclear tax" or government funding:** EDF cannot pay to build SZC; it has been promoting a Regulated Asset Base (RAB) model - essentially a nuclear tax on energy bills - or for the UK government to take a direct stake. According to BEIS Minister Kwasi Kwarteng, HM Treasury has concluded that RAB would count as government debt. RAB had already been widely criticised for pushing the risk of overruns and overspends onto consumers. A RAB-type model for a cancelled plant in the US is costing ratepayers $2.3bn.

4. **SZC has no place in the UK's green recovery:** SZC is not shovel ready, being 12-18 months away from planning consent or licensing (EDF is still changing its plans) and with no funding. A mammoth project in a protected environment must have cast-iron justification, which SZC lacks for all the reasons below. Large infrastructure projects are boom and bust and do not create lasting wealth as Leiston - host to Sizewell B - is evidence to. SZC will damage Suffolk's resilient SME-based local economy for only 900 long-term jobs (costing £22million each). *See 9*.

5. **SZC will not help to "level up" the UK.** Sizewell has the lowest levelling up potential of all possible nuclear sites.

6. **EDF's controversial partner, China General Nuclear** (CGN)**:** Like Comms giant Huawei, CGN is blacklisted by the US for its military connections. Also like Huawei, the Prime Minister faces calls from backbenchers to remove CGN's involvement in the UK's nuclear build programme. There are legitimate concerns about putting our critical national infrastructure in the hands of a Chinese state-owned company.

7. There is a **UK energy policy vacuum**: An Energy White Paper is over a year late; exacerbated by COVID. A revised

National Policy Statement for new nuclear power stations over 1GW post 2025 was due last year.

8. SZC faces considerable local opposition including from Dan Poulter MP, at least 24 Towns and Parishes and Suffolk County Council which "cannot support" EDF's proposals; even cheerleading East Suffolk Council is "neutral".

B. It's the Wrong Project in the Wrong Place; destructive impacts on the local economy and protected habitats

9. **SZC will bring limited Economic Benefits to Suffolk.** An independent critique of EDF's economic case has found:
   a. Any economic benefits for Suffolk are limited by EDF's intended use of the HPC supply chain to save money and reduce risk. Claims that Suffolk/Norfolk could secure supply chain spend of £125 billion/year similar to that at Hinkley Point (which is served by the whole of the SW and S Wales) do not stand up to scrutiny.
   b. EDF's workforce will not be 'local' (EDF defines 'local' as up to 90-minutes' commute away). At peak, 76% of the workforce will be from outside the region. 6,000 workers will need accommodation nearby. 2,400 would be housed in a multi-storey complex close to Minsmere that is opposed by local people.
   c. EDF's own figures show that only 7% or 8% of jobs in 'Professional and Management' are expected to be taken by 'home-based' workers, compared to 90% of jobs in lower-skilled, lower-paid "Site Support".
   d. An Oxford Economic study of Sellafield found where there is a low level of specialist skills locally, direct labour costs and supply chain spend inevitably flows out of the local economy.

10. **SZC will damage Suffolk's local economy, including tourism:** The Suffolk Coast has a thriving employment economy based on family, cultural and eco-tourism:
    a. Local businesses will be impacted through losing workers to the project and from traffic congestion.
    b. Tourism will be significantly affected. The Heritage Coast, with its tranquility and dark skies, is worth more than £200 million/year in tourism revenue. There is huge potential for this to grow, especially post-COVID, but noise, visual eyesores and disruption will likely drive visitors away. EDF makes no attempt to quantify the impact, despite its own surveys revealing that 29% of visitors would be deterred during construction and 39% would probably visit less often. However, a Suffolk Coast Destination Management Organisation study found that tourism could lose up to £40 million a year, with the potential loss of up to 400 jobs.
    c. **At least 8 other energy projects** are proposed for east Suffolk, dubbed - without consultation - the "Energy Coast". The cumulative impacts will be overwhelming on communities with limited infrastructure.

11. **Traffic:** SZC traffic will affect businesses and residents across the region; EDF must bring over 6Mt of materials to site by road meaning 1,000 HGVs/day at peak, 10,000 cars and 100s of buses and vans on Suffolk's A12 and inadequate road network. EDF's limited mitigation by way of bypasses is a further source of local opposition.

12. **SZC threatens Internationally-renowned wildlife reserves:** SZC is surrounded by internationally- protected habitats, including Minsmere Reserve. Habitats for rare birds, animals and plants will be lost forever. The RSPB believes *"Sizewell is not a suitable location for a new nuclear power station"* and *"could be catastrophic for wildlife"*. The Suffolk Coast & Heaths Area of Outstanding Natural Beauty will be cut in two for over a decade. The SZC site is recognised in the National Policy Statement as having significant environmental sensitivity. EDF claims it will meet the 2020 Environment Bill's call for biodiversity 'net gain' but rare habitats are impossible to quickly replace, if ever. **The small size of the site** is a concern; The UK Government's siting criteria assume 30 hectares (ha) are required for a single-reactor nuclear station, yet EDF aims to squeeze two SZC reactors into just 32ha (compared to HPC's 45ha). Even so, EDF must move some of Sizewell B facilities, meaning the destruction of century-old Coronation Wood.

13. **Flood risk and coastal erosion:** There are serious questions about the security of the SZC site from coastal erosion. EDF has only provided a sketch, not a complete design, of its Hard Coastal Defence Feature. Sea level rises could fully or partially "island" the power stations. The SZC site sits in Flood Zones 2 & 3. The Environment Agency has been highly critical of EDF's flood risk assessment, saying it is "neither supported by adequate modelling, nor demonstrates that the site, its users, and neighbouring areas will be safe in the event of a flood".

14. **There is no solution in sight for nuclear waste:** The spent fuel from an EPR is exceptionally hot, so fuel from SZC would have to stay on Suffolk's eroding coastal site for 140 years - potentially until at least 2200 - before it could be moved. The UK has made no progress on building a "permanent" (100,000 yrs+) waste facility.

C. EDF and its EPR have an appalling track record.

15. **EPRs are slow to build, expensive and impossible to accurately predict cost or completion date.** SZC's EPR reactors will be copies of those being built at Hinkley Point C (HPC), currently £2.9bn over budget and up to 15 months late. SZC is already 3 years late: in 2012 when public consultations began, EDF said it wanted to start building in 2018. No country in W Europe has any operating EPRs or new builds besides HPC and the catastrophic Flamanville (France) and Olkiluoto (Finland) projects which are a decade behind schedule and multiple times overspent. Defective valves at Olkiluoto could call Taishan's operation into question and may further delay HPC. The EPR is a failed design, described by Paul Dorfman of UCL as "too complex to build to time and budget". EDF aims to have a new EPR design by 2021, but SZC would be the old design.

16. EDF's reputation has been further undermined by severe criticism from French regulatory body, Autorité des Marchés Financiers and public audit body, the Cour des Comptes, who exposed what was known perhaps as far back as 2016, that EDF has no credible means to finance the Hinkley Point C project. AMF handed down a fine of €5m to EDF and of €50,000 to then Chairman and CEO Henri Proglio. France will not make any decisions about possible new reactors until at least the end of 2022.

17. **Nuclear is an industry in decline**: The Moorside project (Toshiba, Cumbria) has collapsed. Hitachi recently pulled the plug on the Wylfa project (Anglesey); a decision on planning consent has been deferred to 31 December 2020 in case financing can be found. China General Nuclear's Hualong reactor for Bradwell has yet to pass several regulatory hurdles, but public consultations have started despite the controversy of CGN's involvement. Globally, the nuclear units under construction declined in 2019 for the 6th year in a row, from 68 reactors in 2013, to 46 in 2019 (10 are in China). Of these at least 27 are behind schedule.