Together Against Sizewell C

C/o Wood Farm, Westward Ho, Leiston IP16 4HT

31st January 2025

By email only to Rt Hon Ed Miliband Secretary of State, Dept. of Energy Security and Net Zero

Dear Mr Miliband,

Sizewell C – Your ref: MCB2024/21185

Thank you for your letter of 23rd January - however, first and foremost, we wonder whether your response addressed the key issues we raised.

Whilst you note worthwhile attempts by govt. to cope with the impressive radioactive waste and decommissioning problems facing the UK - this does not negate the fact that nuclear decommissioning, and especially present and ongoing production of a very great weight of high/medium/low-level nuclear waste, is a significant negative externality that carries important potential human health, environmental impact and ramping cost risks.

In other words, the fact that actions are in place to try to regulate those risks in no way mitigate the fact that nuclear - and the inevitable waste that it produces - cannot be truthfully described as clean, green, or sustainable. We don't need to go into the details of UK's nuclear waste burden to confirm that fact - as no doubt you are very aware of the problem.

As to questions of relative CO2 mitigation potential that you refer to - it's worth recalling that UK govt. global data analysis reveals that just one new nuclear station takes between 13 to 17 years from planning and regulation to operation. https://publications.parliament.uk/pa/bills/cbill/58-02/0174/ImpactAssessment.pdf

In comparison, global new solar generation capacity was deployed 100 times faster than net new nuclear in 2024, and new wind 25 times faster. https://www.pv-magazine.com/2025/01/13/the-fastest-energy-change-in-history-continues/ It is in this context that, due to shorter timelines and lower cost, Intergovernmental Panel on Climate Change (IPCC) AR6 reports that renewables are now ten times more effective at cutting CO2 emissions than nuclear, and accelerating renewables coupled with energy efficiency is the most efficient way to reduce global emissions by 2030. https://www.ipcc.ch/report/ar6/syr/figures/figure-spm-7 Note, given current trajectories, renewables-plus will be even more productive than new nuclear by that date, and after. The choices we make will determine the success or failure of our climate actions. Cost is key, but time is the most relevant variable – and time is running out.

The UN Economic Council for Europe (UNECE) data you refer to is open to debate. UNECE, based in Geneva, is a small arms-length division of the UN. Notionally pan-European, paying most attention from, and to, Eastern Europe, UNECE has historically published in support of nuclear whilst downplaying renewable energy. It has to be said that given other substantive data, the UNECE figure of 5.5 g CO2 eq./kWh global average seems absurdly low. Further, UNECE's 'revised' front-end energy assumptions seem questionable - as do their back-end assumptions concerning decommissioning, waste storage, transport and disposal. Also, given current reactor life-span data – UNECE's reactor fleet life-span assumption of 60 years seems almost tantamount to disinformation. Hence, for HMG to base an element of their discussion on UNECE outputs seems, at least, problematic.

Here, it's important to note the significant breadth of confidence intervals in sets of diverse studies indicate substantive scientific uncertainty associated with this issue. It's a well-known scientific truism that differing framing assumptions produce differing numbers. That said, there seems to be no such thing as a zero or near-zero-emission nuclear power plant. https://www.pv-magazine.com/2019/04/18/there-is-no-such-thing-as-a-zero-or-near-zero-emission-nuclear-power-plant/

In contrast to UNECE's figures, Prof Jacobsen, a key Stanford University academic, notes that overall emissions from new nuclear are 78 to 178 g- CO2/kWh. https://web.stanford.edu/group/efmh/jacobson/Articles/I/NuclearVsWWS.pdf

Pomponi et al results range from 8 to 64 gCO2e/kWhe. https://www.sciencedirect.com/science/article/abs/pii/S0306261921002555

Earlier, Sovacool et al, note that reported emissions for nuclear energy over the lifetime of a plant results in a mean value of *circa* 66 g CO2e/kWh. https://www.sciencedirect.com/science/article/abs/pii/S0301421508001997

Meanwhile, it turns out that large-scale nuclear roll-out is not associated with significantly lower carbon emissions, while renewables do. Indeed, there are negative associations between scales of nuclear and renewables roll-out - suggesting nuclear and renewables tend to crowd each other out. https://www.nature.com/articles/s41560-020-00696-3 This carries meaning given that, with global annual renewable capacity additions rising from 666GW in 2024 to almost 935GW in 2030, it is a universally accepted fact that renewables will do the heavy lifting for the energy transition. In comparison, nuclear's share of global electricity production almost halved from 1996 to 2023 - largely due to the high costs of, and delays to, building and operating nuclear reactors. Far from improving, the latest reactor designs offer the worst-ever record of delays and cost escalation. Same too for radioactive waste and decommissioning costs.

So, for all the above reasons, in the words of the late Pete Wilkinson, 'it is TASC's opinion, that those who choose to ignore the evidence that clearly demonstrates nuclear power is not clean, are guilty of gross distortion of the facts and are therefore gaslighting the British public.'

We look forward to your response.

Sincerely

Dr Paul Dorfman, on behalf of TASC

Dr Paul Dorfman,

Chair, Nuclear Consulting Group (NCG)

https://www.nuclearconsult.org/

Member, Irish Govt. Radiation Protection Advisory Committee (RPAC)