

# With the UK case for nuclear power lost, the battle now is one of defence

If there is going to be a large cross-subsidy for the military budget, we should have the debate in the open

AMBROSE  
EVANS-PRITCHARD



We can choose to rely on offshore wind as the backbone of British power, linked to a smart, flexible, 21st century grid. Or we can opt for a nuclear revival based on the old concept of baseload power. But we cannot rationally do both.

One cuts across the other. Big nuclear plants run 24/7. They cannot be switched on and off to match the intermittency of renewables. Trying to do both at the same time delays the cost gains of critical scale. It slows the push for cheap energy storage. It confuses investors.

There is no commercial case for giant new reactors in any developed country. They cannot meet post-Fukushima safety demands at viable cost and have been priced out of the global energy market. Precipitous falls in renewable costs have rendered the technology obsolete.

Existing plants are closing early across the US because they cannot compete. One reactor at Indian Point in New York closed in April. The VC Summer project in South Carolina has been abandoned after \$7bn (£5bn) of sunk investment. In the US the competitor is shale gas. In the UK it is offshore wind. In much of the world it is now utility-scale solar.

The Government's energy White Paper released this week finesses the question of cost by ignoring it. Previous White Papers at least tried to guess the future costs of different sources of energy. They were wrong,

vastly understating the falling costs of wind and solar. But at least they put something on paper. This time there is silence.

The reason is that Britain's nuclear expansion has nothing to do with energy supply. The true motive is to underpin the military-industrial complex. "They are wilfully concealing it. The energy debate is being rigged and it's not healthy," said Prof Andrew Stirling from Sussex University.

France's Emmanuel Macron openly stresses the military rationale. Last week he cited the need for a flourishing French nuclear industry to sustain the country's submarines and its next nuclear-powered aircraft carrier. "Our strategic future and our status as a great power depends on the nuclear nexus," he said.

Personally, I back the UK's nuclear deterrent but if there is going to be a large cross-subsidy for the military budget, we should have the debate in the open, properly costed, and subject to parliamentary scrutiny.

Critics have long claimed that the Ministry of Defence relies on civil reactors to generate uranium 235 and plutonium 238 residue needed in nuclear weapons. This is a canard. The UK has a stockpile of these fissile isotopes already.

"Where the rubber really hits the road is in nuclear submarines, and in the future for entirely new battlefield reactors to power the pulse for lasers and directed-energy weapons," said Prof Stirling.

In order to sustain this military machine you need specialised skills and a stream of nuclear engineers coming out of the universities. "Without civil nuclear power, the costs

become prohibitive," he said.

We rely on nuclear submarines because they are silent and hard to detect in the open sea, or at least they used to be before drone technology caught up with them. The "transparent ocean" – as it is known in naval circles – may render them as vulnerable as the HMS Prince of Wales, the brand new battleship sunk by Japanese fighter-bombers in 1941.

Should we lock ourselves into nuclear power plants lasting until 2080 in order to support a submarine deterrent that may be obsolete in 10 years? I don't know. But let us thrash it out.

On the strict cost, there is no contest between nuclear and renewables. The strike price for Hinkley Point is £92.50 per MWh (2012 prices, inflation-indexed). The latest auctions for offshore wind came in at £40 – down from £117 in 2015 – and will become cheaper yet as giant turbines reach 15 megawatts and hi-tech blades push the capacity factor above 65pc.

Of course, you are not comparing like with like with like. But even once you add in the burden of maintaining natural gas plants to cover doldrums, the latest offshore wind farms are still cheaper. Moreover, the cost of energy storage from compressed air is tumbling and that can provide back-up power for days or weeks.

By 2030 it will make sense to overbuild offshore wind, using the excess gigawatts to make green hydrogen at mass scale from electrolysis. This will be used for back-up power, for trucks, ships and synthetic "jet zero" aviation fuel, and for industrial use in steel cement, chemicals and fertilisers.

The White Paper not only



recognises this, the text proclaims it. That is why the Government aims to quadruple the UK's offshore wind capacity to 40GW as soon as this decade. The near perfect wind flows over the shallow sand banks of the North Sea give the UK a global competitive advantage.

So why the awkward section on nuclear power, and the promise to sign off on a £20bn replica Hinkley at Sizewell with EDF under this Parliament even though China's CGN has hinted that it may pull out of the project and leave a gaping hole in funding. The taxpayer will have to dig deep.

The Government says costs will come down. That is always the pitch. What we know is that the two prototype EPR reactors at Flamanville in France and Olkiluoto in Finland are a decade late and vastly over budget, struggling with the Sisyphean task of trying to meet safety demands.

The French Cours des Comptes has issued a blistering report, calling the project a "failure" that will ultimately cost four times the original plan. The spending watchdog poured cold water on promises by EDF that future models would be much cheaper, stating that it could not validate such claims "with a reasonable degree of certainty".

The White Paper makes much of Britain's push into small modular reactors (SMRs). But quite how a smaller version of a big plant can be cheaper per MW/h is a mystery. It violates the law of economies of scale.

Perhaps the push for advanced SMRs will lead to radically different technologies, such as molten salt, that are cleaner, more flexible and can pull off a quantum shift in costs. But if so, why waste so much money on white elephants such as Sizewell C and Bradwell B?

If we are to commit to a fleet of nuclear plants at £20bn a shot, and high tariffs for consumers as far out as the late 21st century, we citizens deserve a better explanation. By all means let us fund a nuclear deterrent – within reason – but please stop pretending that it is energy policy.



### Economic Intelligence

For unique insight into the world's economic issues, sign up to our Economic Intelligence newsletter, by Ambrose Evans-Pritchard and Jeremy Warner

► [telegraph.co.uk/ei-newsletter](https://www.telegraph.co.uk/ei-newsletter)

*'By 2030 it will make sense to overbuild offshore wind, using the excess gigawatts to make green hydrogen'*





Sizewell B in Suffolk. It is questionable that we should tie into nuclear sites until 2080 to support a submarine deterrent that may be obsolete in 10 years

