# The Sizewell Error
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## WINNING WAYS. THE UK'S NUCLEAR FUTURE

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By David Howell

*his week's report that projected costs for the Hinkley Point C nuclear reactor have again soared should prompt the government to rethink its Big Nuclear Strategy. Here,* ***David Howell*** *explains why giant nuclear power stations are yesterday's technology and that the cleaner, cheaper and quicker-to- build Small Modular Reactors are a far surer bet.*

What was predicted, forecast, warned against, feared yet expected by many about the British civil nuclear 'replacement' programme is duly occurring.

Estimated costs for the giant twin nuclear reactor being constructed by Electricité de France at Hinkley Point have soared from an original figure of £9bn to £48bn in today's money. Inflation has taken its toll, but the overshoot is still staggering. And the completion date — one announced by EDF as being by 2017 — has taken yet another lurch into the future and is now 2029.

‘C’est la vie’, the cynics might say with a shoulder shrug. These huge projects always underestimate at the start, always overshoot before they are finished. Every single one of the half dozen or so nuclear plants of the ‘EPR’ design being deployed at Hinkley that have been, or are being, built round the world, with one exception, has had enormous cost and timing overruns. The exception is the project which was completed on time at Taishan in China, jointly built by EDF and China General Nuclear. But it has had a string of operational problems with fuel rod casings, and one reactor has had to be closed.

The EPR design was meant to be the proud grandchild of the highly successful Westinghouse Pressurised Reactor (PWR) model, of which brilliant French engineers managed to construct no less than 58 in the 1950s and 60s (now growing old). But something has gone wrong with this successor design. Even the former CEO of EDF has said that the EPR is ‘too complicated and almost unbuildable.’

Still, if that were the only problem, it would be worrying but not insuperable for determined managers and experienced contractors and technicians, at least to contain against still further cost inflation and delay.

But it is not the only problem by a very long chalk.

Take cost first – the immediate crisis. This is not just a matter of finding the cash to meet the overrun gap. The Chinese, who were brought in as major players in British nuclear expansion more than a decade ago, in happier UK-China times, and who have a one-third financial commitment to Hinkley, have stopped paying up. Love or hate them nowadays, they have been edged out of (actually paid £100mn to leave) other parts of the British programme and handled with appalling ineptitude, leading, utterly predictably, to strong signs of withdrawal at Hinkley as well. So the very large Chinese contribution there will also have to be found from elsewhere.

But EDF has no more money, and the French think the British Treasury should open the chequebook. HM Treasury thinks no such thing. So who is going to fill the gap?

The second ‘hit’ is that Hinkley is supposed to be the model for an identical plant at Sizewell in Suffolk –a so-called ‘replica’. But copying Hinkley, and certainly copying its financial mess, looks less attractive by the day.

The British hope is that a new financial model, requiring consumers and customers to pay extra for years in advance for their electricity, will entice investors to replace the Chinese. One alleged interested ‘private investor’ party is said to be the not-so-private UAE (when not busy with the *Daily Telegraph* and *Spectator*). But is that the kind of swap — the non-aligned UAE in place of the Chinese — we need?

The third impact of a major Hinkley ‘hiccup’ of the kind now occurring throws even more doubt on the viability of these enormous structures. ‘Replica’ of Hinkley C or not, Sizewell C will still take far more than a decade to build and cost a minimum of £25 bn (of which the Government has already stumped up £1.3bn). Sizewell B, which I authorised in Parliament as

Energy Secretary in 1979, produced its first commercial current in 1995. No genuinely private investors are nowadays going to touch risks of this kind with a bargepole.

Fourthly – and perhaps this should come first – for Sizewell to follow on limply from Hinkley C is a major and out-of-date diversion from the new technology of civil nuclear power. Nowadays this is all about much smaller designs, taking a quarter of the time to construct, mostly off-site, with new and less dirty fuels, and plenty of private finance already interested. A string of innovative firms, including our own Rolls Royce, are ready to take orders and have these much more manageable products, in every respect, up and running by 2030. We need about 500 to replace all fossil fuels.

This is where the unquestioned priority in British nuclear should lie, if we want a reliable and affordable low carbon electricity supply system — at least three times the size of our present one, dovetailing nuclear with intermittent wind power — by 2050. This is where many of the world's advanced economies are moving fast – away from the old behemoths.

And it is the path which the Hinkley C imbroglio plainly indicates we should follow if we want to stay abreast of an ever more competitive, new and cleaner world.