



## Greenpeace UK: Advance briefing on new nuclear - SMRs and Sizewell

This Wednesday, the UK government is set to announce [nuclear power's role in the UK's future energy strategy](#), as part of its Ten Point Plan, which will “set out steps for a green industrial revolution to boost green jobs whilst invigorating plans to achieve net zero by 2050.”

Nuclear power has long been touted as the green solution to the UK's energy needs and a cleaner alternative to fossil fuels, but plans to ramp up the amount of energy produced by nuclear power in the UK have repeatedly failed to deliver.

It's thought that the Ten Point Plan could give the new large nuclear plant at Sizewell in Suffolk funding support and announce plans for a speculative form of 'new nuclear' power produced by small modular reactors. Here's what you need to know:

### Small modular reactors (SMRs) and why we should remain sceptical of them

In theory, a small modular reactor is an alternative to expensive large scale nuclear plants, built from “modules” which would be made in a central factory and then assembled on site. In theory. This form of technology is speculative, as is its low cost price tag, as SMRs don't exist anywhere in the world yet, not even a working prototype.

The cost benefits that are claimed from SMRs only work when a large number of reactors are being manufactured, but there are currently no private customers for them in the UK, so the only route is government money and guarantees. [Rolls Royce wants the government to commit to 16 reactors](#) on the basis of these claims of reduced cost with higher build rates. However, this is based on expecting the SMRs to guarantee around 55TWh of electricity generation, which is more than one sixth of the UK's total current electricity generation.

The only programme of SMRs in the world, in the USA, is suffering from rising costs and delays causing some of its potential customers to pull out - estimated [costs have gone up more than 50% since 2015](#), and quintupled in price since proposed in 2003. Add to that the fact that the nuclear industry rarely delivers projects on time or on budget, and you can see why this speculative technology is unlikely to deliver on its low price promise.

It's also worth highlighting that SMRs don't solve the issues of nuclear waste, security, proliferation and terror threat that arise with larger conventional reactors.

### Why Sizewell doesn't size up

Billions of pounds that could have been used to fund renewable projects, has been wasted on the building of Hinkley Point, [which is continuing to run over time and budget](#). Yet the government's expected to give the green light to another new large nuclear plant at Sizewell in Suffolk tomorrow, which could be a costly mistake.

If Sizewell was able to be constructed on time, it would still be 13 years before it was ready and [20 years until it managed to clear the carbon debt](#) of its construction. Given how rapidly energy technology has advanced in the last ten years, there is a very good chance that a new large nuclear plant wouldn't be needed by then. Offshore wind, onshore wind and solar are all already less than half the cost per unit of power generated than nuclear power - [this price differentiation is very likely to continue to grow](#).

The government has produced no analysis to show that nuclear reactors are essential, despite being asked by select committees to do so. It is [making the same strategic mistakes](#)

[in decision making](#) as the Cameron and May governments did with Hinkley. Being drawn in to commitments they can't pull out from, by conducting secretive deals behind closed doors with no scrutiny or competition, for the convenience of the nuclear industry.

Sizewell's proposed funding model, the 'Regulated Asset Base' (RAB), [will transfer the risks of rising costs and delays from the builder to the consumer](#). Given the history of building nuclear power plants often comes with rising costs and delays, it is fair to say this scenario is likely. A mechanism similar to the RAB was used to finance a nuclear power station in South Carolina, which collapsed and will not be finished. Payments for this project that will never generate power [still make up about 18% of customers' bills](#).

### **What energy policies is Greenpeace calling for instead of nuclear?**

- A commitment to ensuring at least 80% of the UK's power is generated from renewables by 2030.
- In addition to a commitment to delivering at least 40GW of total offshore wind generation by 2030, publicly commit to targets for total generation of 45GW of solar and 35GW of onshore wind by 2030.
- Improve and streamline the planning regime and support rooftop solar by means of procurement on public sector roofs and fiscal incentives, such as lower business rates to encourage private investment. Ease planning constraints on wind power in England and give proper support to community energy.
- Set out a clear policy for transforming the electricity grid so that, by 2030, it can deliver a reliable, flexible system with 80% renewable generation and additional power use by electric vehicles and renewable heat systems.
- Expand Ofgem's core mandate to include supporting the delivery of net zero emissions, alongside protecting consumers.