Nuclear power policy in the UK

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There is no UK-wide policy

- Northern Ireland too small – and physically joined to strongly nuclear-negative Irish republic
- Wales ambiguous – politically anti, but interest for new build around existing nuclear site at Wylfa
- Scotland adamantly opposed to any further nuclear, and with an unrealistic target of 100% renewables
- So in practice it's England that has a strongly pro-nuclear new-build policy, with all-party majority support
- Within bureaucracy, some differences, with Treasury strongly supporting, other departments more ambiguous

Effects of Fukushima?

- Fukushima hardly disturbed UK public opinion at all – Japan was seen as distant, and UK reactors were almost all of radically different gas-cooled designs
- A safety review was conducted and relatively minor changes required to existing operations and to any new reactors
- Negative cost effects for existing reactors much outweighed by lifetime extensions to most existing reactors of up to 7 years – highly profitable

Recent UK history

- Privatisation of nuclear proved impossible in 1989 because costs were much too high
- During heyday of economic liberalisation (1980s until early 2000s), new build was ruled out because of high costs of new reactors – 2003 White Paper rejected nuclear on cost grounds
- From 2006, Blair Government announced return of new build
- Originally there was to be 'no subsidy', then 'no *public* subsidy' and now 'no subsidy greater than for other low carbon technologies'
- But by 2013 no genuine project proposal yet tabled, despite apparent enthusiasm of EDF.

Three consortia with interest in UK new-build

- Leading contender is EDF, initially with a 20% partner in Centrica – now withdrawn. Rumours of Chinese or Russian interests to supplement EDF's inability to finance alone. Intention to to build 4 EPRs – first two at Hinkley Point
- Second contender was Horizon – a partnership between RWE and E.On. Both withdrew and sold Horizon to Hitachi, which now proposes a GE ABWR – which will take up to 5 years to licence
- Third contender is NuGen – Iberdrola and GDF Suez, waiting to see what happens to EDF proposal. Technology not yet chosen

Context of pro-nuclear policy (1)

- Ambitious political commitment to cut 2050 carbon emissions by 80% in absolute terms compared to 1990.
- A corresponding political desire to virtually de-carbonise electricity system by 2030
- Government in 2013 announces expectation of 16-75GW of nuclear by 2050 – return of 1970s fantasies e.g. breeders, thorium, small modular reactors etc.
- Deep contradictions in Government policy announcements – nuclear is both ‘indispensable’ but equally ‘the market’ will decide how much (and whether) capacity is built

Context of pro-nuclear policy (2)

- A large current reform of the electricity market to favour low-carbon investments is now being shaped
- This includes floor carbon price and a form of feed-in tariff (FiT), with contracts for difference, for low-carbon sources
- Hope was for FiTs to be established by competitive auction, but in the nuclear case this has reduced to a secret bilateral negotiation between Government and EDF

Current state of play

- EDF and UK Government locked in much-delayed bargaining game to determine the FiT for nuclear. Both interested in a positive outcome – both proving hard bargainers. Treasury has offered EDF £10 bn. in loan guarantees
- Hinkley project expected originally to cost around £10 bn. After bad experiences (Olkiluoto/Flamanville/Fukushima) EDF now seems to expect £14 bn. (c. 4800 euros/kW)
- However, in the negotiations the incentive structure is the reverse of normal – EDF has an interest in talking *up* the costs in order to secure a higher FiT

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Current FiT expectations for nuclear

- Context is current wholesale electricity price of c. £50/MWh (fairly stable and realistic)
- Expectation is that nuclear FiT will be finally agreed somewhere between £90/MWh and £100/MWh
- Also a negotiation over length of FiT contract – EDF appear to want 35 years, as against no more than 20 years expected for renewables
- So level of subsidy likely to be in the range of 80% to 100% above market price. Offshore wind probably more expensive than this, onshore probably less.