

HINKLEY STRIKE PRICE BRIEFING

1. HINKLEY UNFAIR ON CONSUMERS

The £92.5/MWh strike price for nuclear power will be fixed for 35 years – so today's 25 year-olds could still be paying for this contract with their pensions.

£92.5/MWh is nearly double the current market price for electricity. Meanwhile the National Audit Office, in its briefing for the House of Commons Energy and Climate Change Select Committee, quoted 2011 revisions to DECC's costs of nuclear power as being **£74/MWh**. The original claim of cost in the 2008 White Paper, on which UK Government justified supporting new nuclear, was **£38/MWh**.

So not only is the strike price almost double the current market price for electricity (currently at around £50/MWh), it is also well over twice DECC's original cost estimate for nuclear power.

The 10% rate of return on investment **reportedly given to EDF** is double what is offered to renewables. When DECC was challenged over the reduction in the rate of return under the Feed in Tariff (FiT) for small scale solar PV, **it stated**, "we continue to consider that a significantly lower tariff is needed to provide generators with a rate of return of 4.5% to 5% for well-located installations. We are not persuaded that a higher rate of return would be reasonable given the focus of the FiT's scheme ... and given the current investment climate."

The Government contract with EDF for Hinkley is expected to guarantee it a fixed price for 35 years, inflation-indexed until 2060. This is double length of time commitment for **renewable energy sources** (15 years)

EDF has also been offered **loan guarantees of £10 billion** to reassure investors, meaning much of the actual risk sits with taxpayers rather than those providing the money.

It is not at all clear that this level of support is legal under **European competition law**. The EU recently **refused to include Nuclear in new** state aid guidelines. Experts have argued that approving state aid for **nuclear could take over a year** - if it is possible at all.

1. RENEWABLES WOULD BE CHEAPER

DONG Energy, a big offshore wind farm developer, has said it could reduce its market price for electricity from **offshore power to £85/MWh for projects taking**

investment decisions by 2020.

Siemens **has similarly announced** its intention to reduce offshore wind costs to the same levels.

The Crown Estate has carried out **research** suggesting that the cost of wind will fall to £100 or below by the 2020's. However these assumptions depend on the roll-out of renewable technologies at scale and on contracts longer than 15 years.

The cost of manufacturing and deploying other renewable energy **sources at scale is falling**. The European Wind Energy Association claims that by that time Onshore wind will cost £48/Mwh, potentially making it the UK's cheapest power source (**EWEA**).

In the solar sector panel prices have fallen by 80% in the last three years. In Germany, the **FiT for large scale solar PV** has decreased from £382/MWh in 2004 to **£130/MWh, and £90/Mwh for large installations**. That means Hinkley will be more expensive than large-scale German solar with guaranteed support for only 15 years (compared with the 35 years demanded by EdF for Hinkley).

Even under the terms of a 15-year contract, the Solar Trade Association is now saying that the solar industry should be offered contracts at £91/MWh - cheaper than the expected Hinkley C price - in 2018/9 - about 4 years before Hinkley will begin operation.

Even if this price regression slows, large scale solar support schemes will be cheaper than the suggested UK nuclear strike price in the early 2020s, the earliest at which the first reactor could come on stream.

The risk of gifting an exorbitant strike price to Hinkley for over 3 decades is that it will displace investment in these cleaner, safer, cost effective technologies which will be cheaper because the Levy Control Framework will cap spending on low carbon investments. Thus if nuclear gets it, other technologies won't.

1. **NUCLEAR WON'T DELIVER**

Putting too many of our low-carbon eggs in the nuclear basket could undermine the UK's ability to hit its climate targets and keep the lights on - if nuclear fails to deliver.

There are two reactors being built in Europe that are similar to Hinkley - both are overdue and considerably over budget.

In Flamanville France, **Italian utility, Enel** pulled out after repeated delays and cost over-runs. In Finland the Olkiluoto 3 project (already four years overdue) **recently announced** it will fail to meet its latest deadline of 2014 and a new deadline has not been set. The delays are forcing Finland to burn more fossil fuels and

have led it to rule out further **reactors of the same design.**

As, **SSE's Dr Keith Maclean** puts it, "*deciding to build new nuclear power stations now will do nothing to avoid a capacity crunch in 2017, let alone before then. These are huge projects with long lead times, mammoth up-front construction costs and a recent track record littered with cost-overruns and failed projects.*" **Parliament's Energy and Climate Change Committee** also found no significant implications for UK security of supply if a deal with EDF is not signed.

Even if built, nuclear power is far from an ideal energy source. The need to run it constantly makes it economically inefficient when combined with a grid that will already have around 30% renewable power. As well, nuclear plants are prone to unplanned outages (**for example due to seaweed**) which can often last long periods - removing large swaths of generation capacity without warning.

1. **RENEWABLES CAN DELIVER**

Offshore wind and other renewables offer a ready-to-deploy alternative to ensure security of supply at similar cost.

Committee on Climate Change Chief Executive David Kennedy has told Parliament that backing up wind to ensure that power is always available would cost no more than £10-20/MWh.

There are also considerable opportunities from **reducing inefficiency in the power sector** – a policy process which has been very slow to get started under EMR whilst nuclear policy has been the focus.

Germany and Denmark are both also seeking to make ambitious carbon reductions without nuclear power. Both plan to be 100% renewable by 2050 and Denmark will source half its power from wind energy alone by 2020.

And it's not just countries. Companies such as Google are moving towards 100% renewable energy (**Google**). The firm is also investing in renewable energy projects around the world (**Sweden, South Africa**) and in **advanced renewable technologies**, such as floating wind turbines.

Interconnectors with the rest of Europe, **new developments in storage, gas plants which also provide heat** and smart grids that help manage demand are just a few of the ways the UK could mainly decarbonise without nuclear.

Reports by **accountants PWC, WWF/Gerrad Hassan** and **Zero Carbon Britain** have shown high penetrations - up to 100% - of renewable energy are deliverable across Europe.

Thousands of jobs could be created in the ports and cities of the North East building the world's largest offshore energy project. The Norsetec offshore wind project could create 185,000 jobs and generate 40GW of power from the North sea. That's enough to power London, Paris, Berlin Dublin, Edinburgh, Copenhagen, Amsterdam, and Brussels combined. **(Norstec/Business Green)**

The UK could lead the world in marine technology. The world's largest wave farm is already being built in Scotland **(BBC)** and in future the Severn estuary could generate enough energy to replace HInkley four times from wave and tidal power without a barrage **(Regen SW)**.

Meanwhile If the UK hits its target of 30% renewable electricity by 2020, **it will create 4- 10 times more new jobs** than Hinkley, even at the peak of Hinkley's construction.

5. AND SO CAN EFFICIENCY

DECC estimate there is around 69TWh potential in demand reduction (i.e. paying people to reduce how much power they need). This is equivalent to almost 3 Hinkley C projects.

The amount of money put aside for this in their new Electricity Demand reduction project is £20mn

Assuming that a strike price of £92.5/MWh is agreed, vs a market price of £50/MWh, then that's £43 per MWh subsidy. Hinkley C, if it ever gets built, would receive a subsidy of £20mn from just over 6 days of operation.

So despite the potential being 3 x Hinkley, it receives the value of 6 days of operation compared to a contract of 35 years. Less than one two thousandth of the money Hinkley is likely to get, at a subsidy rate of around £1 billion per year.

6. TIE UP WITH CHINA

George Osborne has just announced that Chinese companies will be funding Hinkley **up to 49 per cent of the project**. This follows the pull out of Centrica earlier this year from the consortium planning to build and EDF needing another partner to finance it. **Reservations have been expressed** about the compatibility of Chinese

industry with the UK approach to regulation. The move has also been criticised by former BBC journalist Isobel Hilton who now runs **China Dialogue**. She says:

“Surely we, too, should be asking more questions of a chancellor who appears to think that Chinese money buys him out of the intractable difficulties and uncertain costs of nuclear power? Will British consumers end up paying high energy prices to guarantee a Chinese investor a good return? What future leverage will Chinese investment in British infrastructure give to an emerging power that frequently says it does not accept established global rules? What degree of transparency and accountability can we, as applicants, enforce on our new partner? What guarantee have we that in depending on Chinese finance, we haven't surrendered more than we bargained for?”

CONCLUSION

The Hinkley strike price deal is deeply unfair to consumers. While a state-owned French company, and state-owned Chinese companies reap the benefits, UK households will be getting ripped off for the next 35 years.

Even if Hinkley is completed to time and budget (which has not occurred with two similar projects in Europe), it will displace investment in newer, cheaper technologies and leave us locked into high priced nuclear for decades. The terms on offer to EDF are much better than those on offer to renewables, and dwarf the available money for power efficiency measures.

With offshore wind and solar now expected to be cheaper than nuclear by 2020s (even accounting for back up to deal with intermittency), the case for billpayers forking out £82 billion for Hinkley is more shaky than ever.

ENDS