

UK Energy Policy?

The nuclear dimension

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The Government's proposed deal at Hinkley C with Electricité de France would hand effective control of a major part of the UK's nuclear electricity to the French and Chinese Governments, double the price of electricity, and result in thousands more old people dying from fuel poverty.

In recent months, the UK's energy policies have rarely been out of the headlines. We have seen dashes for gas; an all-out push for nuclear; yo-yoing on renewables; and much hot air on energy efficiency subsidies. In December 2013, the Prime Minister asked the 'Big Six' energy companies to lower energy price increases, following the Labour Party's promise to freeze prices if elected in 2015. Add the Government's support for unpopular fracking, together with the widely criticised proposed deal on nuclear electricity at Hinkley C, and one begins to wonder what is going on. In Europe, energy analysts apparently shake their heads in disbelief at the disjointed series of events occurring in the energy sector in the UK.

This is alarming, as coherent energy policies are vital to address several important issues, including security of supply, global warming, and fuel poverty. Just to take the last point: 31,000 elderly people die every winter from fuel poverty, according to the Office for National Statistics, which amounts to eight older people every hour in winter, from NHS figures.

Several factors contribute to the muddle. One is the existence of strong differences of opinion within the Conservative/Liberal Democrat Coalition on most aspects of energy policy. Another is that the Government is repeatedly outmanoeuvred

by the Big Six energy companies, though the Department of Energy & Climate Change (DECC) and the Treasury refuse to admit this. It doesn't help that the energy companies reportedly have numerous advisers inside DECC steering energy policies their way. A further one is that the Government is ideologically bound in its resistance to more regulation when that's what is needed. This is similar to the Government's adherence to market dogma, despite clear evidence that the market has often failed in this policy area – namely, carbon pricing, energy efficiency projects, contracts for difference, even global warming itself, according to the former Treasury advisor, Lord Stern. What emerges here is a picture of a dysfunctional and inconsistent framework for implementing national energy aims.

One energy policy area stands out as particularly incoherent: nuclear power. To say that the Government appears besotted with nuclear is an understatement: it's more like an obsession. Consider the following. The Government wants to give £10 billion to the French Treasury (via its ownership of 84% of Electricité de France (EdF)) to pay for 2/3rds of the cost of building the proposed Hinkley C plant in Somerset. It wants to give a major say to the Chinese and French governments in building and running the plant. And it wants to promise EdF to double the current price of nuclear electricity and guarantee this for 35 years – worth another estimated £40 billion to the French Treasury. Recently, the British Government announced it also wanted to offer similar massive subsidies to Toshiba (which owns US Westinghouse) for a new nuclear power station in north Wales. These policies, if implemented, would have major adverse effects on UK fuel poverty and winter hypothermia deaths, at the least.

Indignant public responses

Perhaps 'incoherent' is too polite a word. Certainly, the public's response to DECC's proposed deal with Electricité de France on nuclear electricity prices, announced in October 2013, has been highly indignant. Here are some of the more colourful raspberries:

- the Energy Secretary had let EdF *'take the British Government for a ride'* over the *'ludicrously high'* subsidy deal to fund the proposed £16 billion Hinkley nuclear plant. Lord Lawson, *former Chancellor (8 November 2013)*
- *'Flabbergasted ... we are frankly staggered ... Hinkley will be the most expensive power station in the world.'* Peter Atherton, *Liberum Capital (30 October 2013)*
- *'We could be staring at a truly astronomical cost by the end of the contract.'* *'The government surely can't be that dumb,'* comments one

City analyst. ‘*One assumes not.*’ Nils Pratley, Guardian finance writer, (18 October 2013)

- ‘*Hinkley – a lousy template for nuclear Britain ... it’s hard not to have misgivings over the costs and strategic logic of this deal ... by 2023, consumers will be paying £720m a year above the market price ...*’ Alistair Osborne, Daily Telegraph finance writer (21 October 2013)
- ‘*... a huge public contribution towards yesterday’s energy thinking.*’ Alan Simpson, former Labour MP (23 October 2013)

And there are plenty more in the same vein.

Nuclear fetish – why?

The British Government’s nuclear fetish is hard to understand, given the prohibitively high costs of nuclear power. Nuclear construction costs have always been high but, in recent years, they have increased substantially: the anticipated cost of Hinkley C is now £16 billion, which is 1.5 times the cost of the 2012 UK Olympic Games. This is for one nuclear station which would supply less than 4% of the UK’s electricity if it were ever built and operated.

Currently, two nuclear stations are being built in Europe: both are wildly over budget and years, approaching decades, behind schedule. These are European pressurised reactors (EPR) – the same type EdF wants to build at Hinkley. Major legal, financial and technical questions hang over both European projects: they may well never be finished. The plant under construction in Finland at Olkiluoto is in severe difficulties, and it is thought that Areva, the constructors, may even have pulled out of the project. The other is in France.

Meanwhile, the costs of renewable energy sources such as wind power and photo-voltaics continue to plummet. As a result, nuclear projects across the world are increasingly being abandoned. For example, Germany, Belgium, Switzerland, Italy and Japan, as well as large multinationals such as E.ON, RWE and Siemens have abandoned nuclear in order to pursue renewable energy policies. As pointed out by *The Economist* (‘Britain runs towards nuclear energy as other countries flee’, 26 October 2013), the UK is alone in the European Union in having advanced plans for more nuclear power, apart from Finland.

On 21 February 2014, *The Spectator* followed up by asking ‘Why has Britain signed up for the world’s most expensive power station?’ It stated that MPs owed it to the taxpayer to throw out the proposed Hinkley deal.

Justification for nuclear: climate change?

The British Government’s justification for new nuclear is that its low CO₂

emissions address concerns over climate change. There is little doubt that global warming is a real and serious threat, but nuclear is a poor answer. Those who defend nuclear, including columnists such as George Monbiot and former environmentalists such as Mark Lynas, appear to overlook that uranium mining, uranium milling, uranium enrichment, nuclear fuel fabrication, and radioactive waste treatment all have heavy carbon footprints.

But it's more than that: the crucial factor is that nuclear has limited potential to reduce UK's CO₂ emissions. In 2006, the Government's former Sustainable Development Commission estimated that a 10 GW fleet of new nuclear power stations would address 4% to 8% of the UK's carbon emissions depending on assumptions. This means Hinkley C alone would address ~0.5% to ~1%.

In fact, of the many options available (wind, wave, solar thermal, photovoltaic, biofuels, hydro, etc) nuclear is arguably the least effective way to reduce CO₂ emissions. Amory Lovins, the eminent US energy guru, has calculated that, in terms of \$ per tonne of C saved, nuclear is the worst possible way to reduce CO₂ emissions: efficiency and the renewables are much better methods. Moreover, the cost gap between nuclear and the renewables is widening daily.

Apart from its past history of distortions, cover-ups and secrecy, the nuclear industry suffers from other disadvantages. The ongoing crisis at Fukushima in Japan following the quadruple explosion, triple meltdown nuclear accident in March 2011 is not reassuring. Neither is nuclear sustainable, following Cumbria County Council's decision in February 2013 to oppose DECC's plans for dumping nuclear waste in Cumbria. And there is always the spectre of nuclear proliferation worldwide.

What we are missing?

In much of Europe, and even nowadays in the United States and the developing world, 100% renewable energy goals are becoming the norm. Tragically, the British Government's nuclear plans mean we are missing out on the following electricity potentials:

[TWh= terawatt-hour (10¹² watt-hours) the unit for electricity generated/used]

- 155 TWh/year generated by offshore wind;
- 40 TWh/year by implementing a comprehensive domestic energy efficiency programme by 2030;
- 100 TWh/year saved through other efficiency measures;
- 22-140 TWh/yr from solar PV on domestic roofs;

- 30 TWh/yr from solar PV on industrial and commercial roofs;
- 140-190 TWh/yr from solar farms – just using land currently used for growing biofuels.

This totals ~500 TWh/yr which is greater than the UK's current consumption of ~330 TWh/yr.

Recent changes

Recent months have seen increased questioning of the Government's mania for nuclear, as shown by the colourful comments in response to the proposed deal at Hinkley. On 28 November 2013, former CEO at BP and current Government adviser, Lord Browne, stated that nuclear power was 'very, very expensive indeed'. He reflected the views of some bankers such as the President of the World Bank who, in response to questions about the bank's energy lending policies, stated 'we don't do nuclear energy'. Even *The Times*, in December 2013, published a letter critical of the government's absurd nuclear plans from a dozen academics.

But it's hard to be optimistic about the prospects for immediate change. One problem is the disinformation peddled by some newspapers and media about UK renewables, and about Germany's decision to embrace renewables and exit nuclear – a policy that we would do well to emulate. How many know that Germany now has more than 450,000 jobs in the renewables industries compared with about 30,000 here?

Finally, it's dispiriting that the Labour Party is just as attached to nuclear as the Con-Dem coalition. Labour's acceptance of the proposed Electricité de France deal at Hinkley means cross-party agreement exists which is difficult to dislodge even if it's absurd. In other words, more old age pensioners will die from fuel poverty in future if the deal is implemented and electricity prices were increased. It's high time Labour's pro-nuclear policy was re-examined: we should recall that, prior to 2003, the Labour Party and the TUC were formally anti-nuclear. What happened then? Tony Blair forced through a pro-nuclear policy.