



No.42 July 2012

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1. New nuclear - spinning itself back on track?

The prospect of new nuclear power stations being built in the UK for the first time in 20 years moved forward with the announcement by EDF Energy that it had selected a joint venture between a French and British company as the preferred bidder for the £2 billion civil works contract for the Hinkley Point C project. (1) The contract with the 50-50 joint venture between Bouygues Travaux Publics and Laing O’Rourke is, of course, contingent on planning permission and on EDF taking a positive final investment decision later this year. The scope of work of the main civils contract includes the nuclear island; conventional island; balance of plant; waste disposal; operational service centre; temporary civil structures; contractor’s offices on site; and contractors roads, platforms and networks, EDF Energy said in a statement. Bouygues Travaux Publics is the French civil engineering firm that led the joint ventures for the civil works — although not with Laing O’Rourke — on the Areva EPR reactors at Olkilouto in Finland and Flamanville in France. (2)

At the same time a major stumbling block standing in the way of building a new reactor near Sellafield has finally been overcome. Ofgem has used its powers to allow NuGen, a consortium of Iberdrola and GDF Suez, to finally set foot on the ‘Moorside’ site so it can carry out investigations to see whether the land is suitable for reactor development. Lord Egremont, who owns the mineral rights, had been refusing to give NuGen permission to drill boreholes. NuGen expects to move on to the site in the next three months. Investigations may take up to two years. (3) NuGen has now hired US-based Jacobs Engineering to supply engineering services under a two-year framework contract. The contract will see Jacobs supplying environmental consultancy and engineering support. (4)

Taken together with the fact that three or four consortia have submitted bids to buy Horizon Nuclear (see below) the industry seems to be united in presenting a positive spin on its future prospects.

EDF continues to deny the reality of what is almost universally accepted — outside Whitehall and EDF corporate offices – that Electricity Market Reforms will provide a public subsidy for new reactors. EDF now has the Government over a barrel. If the Government wants new reactors to go ahead it will have to agree to EDF’s demands. EDF wants reforms to the energy market speeded up to enable the firm to make its final investment decision for Hinkley by the end of the year. Special

projects director Jeremy Western says there are still three areas where the government needs to do more work: creating a “tangible counterparty” to sign contract for difference feed in tariffs (CFD Fits); ensuring the transitional agreements are legally robust and ensuring EMR reaches Royal Assent in spring 2013. (5) But it will be setting the “strike price” which EDF will need which will be crucial.

David Toke, Senior Lecturer in Energy Policy provides a dose of realism. He says barring some unlikely bizarre manoeuvres and political chicanery it is impossible for EDF to achieve the terms they need to fund even the first nuclear project at Hinkley. The sheer cost of the sort of contract that EDF would demand in order to proceed would be far too prohibitive for the Treasury to accept. Using Peter Atherton’s analysis (Citigroup) of the ‘strike price’ needed by nuclear, (£166 per MWh), then funding of Hinkley would raise average electricity prices by 8% over 30 years. Such an increase in consumer costs is politically impossible. (6)

Pro-nuclear interests are trying to support EDF’s efforts to get the Government to be ‘the counterparty’ to the contracts giving premium prices for nuclear electricity generation. This would mean giving state guarantees to enable cheap loans to be secured by EDF for the project. It is the ‘blank cheque’ option since in practice the state would have to pay for nuclear construction cost-overruns. However, this also is highly unlikely. Although the price of any contract issued for Hinkley C generation would be reduced somewhat (although it would still be very expensive), this would also mean that the cost of Hinkley C (£14 billion) would have to be added to the Public Sector Borrowing Requirement (PSBR). This would do significant damage to the Government’s debt reduction plans and would likely mean greater cuts in public spending.

A recent Institute of Directors (IOD) report which claimed nuclear power is cheap at £70/MWh based its number on a Civitas report published in January 2012. (8) The Civitas report was, incidentally, attacked by Renewable UK as being based on the work of cranks. (9) Wade Allison, who is co-author of the IOD report, and has presumably written the sections on radiation on health, has even been attacked by former BNFL scientist Dr Richard Wakeford for suggesting that low doses of radiation might be beneficial. (10) Leaving wind costs and radiation to one side, the figures for nuclear are taken from the Government-commissioned Mott Macdonald report. (11) Both IOD and Mott Macdonald agree that first of a kind reactors will cost £95/MWh. Mott MacDonald’s numbers depend on a 60-year life for reactors and an 85% load factor – both extremely optimistic figures based on unproven manufacturers’ claims. Mott Macdonald also assumes an optimistic 4 to 5 year construction period and a 10% interest rate on the cost of borrowing. (12) If the interest rate is closer to 15% because of the lack of Government guarantees then the costs are more likely to be around £135/MWh. (13) And these numbers were before the recent soaring costs reported in *The Times* in May. It seems the costs of a single EPR have risen 40% from £5bn to £7bn (14) – hence the Citibank figure of £166/MWh. (15)

- (1) Telegraph 19th June 2012 <http://www.telegraph.co.uk/finance/newsbysector/energy/9340455/New-UK-nuclear-plants-a-step-nearer-as-EDF-awards-2bn-contract.html>
- (2) i-Nuclear 18th June 2012 <http://www.i-nuclear.com/2012/06/18/bouygueslaing-orourke-chosen-as-preferred-bidder-for-2-billion-hinkley-civil-works-contract/>
- (3) Whitehaven News 21st June 2012 <http://www.whitehavennews.co.uk/news/moorside-work-unlocks-n-site-1.967319?referrerPath=news>
- (4) i-Nuclear 29th May 2012 <http://www.i-nuclear.com/2012/05/29/jacobs-engineering-wins-contract-from-nugen-for-work-on-uk-new-build-project-moorside/>
- (5) New Civil Engineer 20th June 2012 <http://www.nce.co.uk/news/energy/edf-energy-wants-more-government-action-on-energy-market-reform/8631921.article>
- (6) David Toke’s Green Energy Blog 25th June 2012 <http://realfeed-intariffs.blogspot.co.uk/>
- (7) Britain’s Nuclear Future, Corin Taylor, Dan Lewis and Wade Allison, IOD, June 2012, <http://www.iod.com/mainwebsite/resources/document/britains-nuclear-future.pdf>
- (8) Electricity Costs: The Folly of Wind Power, by Ruth Lea, Civitas January 2012 <http://www.civitas.org.uk/economy/electricitycosts2012.pdf>

- (9) See Renewable UK Press Release 9th January 2012
<http://www.bwea.com/media/news/articles/pr20120109.html>
- (10) <http://www.guardian.co.uk/environment/2011/apr/05/walking-fine-line-nuclear-debate?INTCMP=SRCH>
- (11) UK Electricity Generation Costs Update, Mott Macdonald, June 2012
<http://www.decc.gov.uk/assets/decc/statistics/projections/71-uk-electricity-generation-costs-update.pdf>
- (12) For further discussion on Mott Macdonald's costings see Corruption of Governance by Ron Bailey and Lotte Blair: [http://www.ukace.org/publications/ACE%20Campaigns%20\(2012-01\)%20-%20Corruption%20of%20Governance%20-%20Jan%202012](http://www.ukace.org/publications/ACE%20Campaigns%20(2012-01)%20-%20Corruption%20of%20Governance%20-%20Jan%202012)
- (13) See Future of Utility Finance in the 2010s by Pete Atherton. May 2012 <http://www.future-es.com/wp-content/uploads/2012/05/Future-Energy-Strategies-Peter-Atherton-Utility-Finance-in-the-2010s.pdf>
- (14) Times 7th May 2012 <http://www.thetimes.co.uk/tto/business/industries/utilities/article3406852.ece>
- (15) News in London 8th May 2012 <http://thenewsinlondon.co.uk/blog/2012/05/08/uk-nuclear-build-requires-taxpayer-rescue-citi/>

2. More Renewable Subsidy Cuts?

Plans for dramatic cuts in government subsidies for onshore windfarms are being drawn up by the Treasury, according to *The Observer*. (1) George Osborne is demanding cuts of 25% in subsidies, a reduction the industry says would "kill dead" the development of wind power sites. The Treasury's stance has put the chancellor at loggerheads with the Liberal Democrat energy secretary Ed Davey. Osborne, whose reputation has taken a dive following his widely criticised budget and a subsequent string of U-turns, has been under heavy pressure from Tory MPs to reduce the billions spent on green commitments. (2)

"This is a reckless act of political opportunism by a chancellor keen to boost his popularity among his backbench MPs," said Juliet Davenport, chief executive of renewable electricity supplier Good Energy. However, Chris Heaton-Harris, the Tory MP who is leading a backbench campaign for cuts, said he was greatly encouraged. "I want to see a dramatic cut," he said, arguing that onshore wind power was expensive compared with gas and that it would drive up fuel poverty.

But onshore wind is the cheapest renewable technology, and according to the Grantham Research Institute on Climate Change at the London School of Economics costs will fall even further over the next few years so that by 2016 wind electricity will be as cheap as gas. (3)

Ed Davey is due to announce the details of the value of Renewable Obligation Certificates - or "Rocs" - covering the period 2013-2017, when the Energy Bill is published in a few weeks' time. That will follow a consultation on whether they should be cut by more than the 10% already planned. The Department of Energy and Climate Change's (DECC's) initial proposal last October was for a 10% cut in the support for onshore wind. But the *Observer* says the Treasury has demanded a 25% cut. (4)

Juliet Davenport said: "The 10% proposal was the product of independently commissioned analysis by DECC. If the Treasury swoops in at the last minute and shortcuts that process, the credibility of the government's renewables policy will be in tatters, along with the prime minister's claim to be the greenest government ever. Of course, some might argue that is precisely what the chancellor wants to achieve." (5)

The Observer says decision on the value of ROCs has been delayed by the Treasury "crawling all over" the new rates put forward by Davey. This has meant that the whole of the UK's renewables investment portfolio is being jeopardised.

In February more than 100 Conservative backbenchers wrote to the prime minister demanding cuts to the £400m a year public subsidies for windfarms which they see as evidence of too much Lib Dem

influence over coalition policy. But, despite the noise made by anti-windfarm campaigners, 70% of people want more windfarms. (6)

Communities need to be "bribed" to accept more windfarms in the countryside, says Tim Yeo, chair of the Commons energy and climate change select committee. Yeo said cutting financial support for windfarms and making them harder to erect did not make economic sense. "*The cost of onshore wind is about half that of offshore wind,*" he said. "*If you want to cut down the cost, slow down the rate of offshore wind development, not onshore. If we shut down all the onshore wind in the country, families would save just £6 a year.*" (7)

Less than 10% of renewable energy in the UK is owned by individuals or communities, compared with over 65% in Germany, where four times as much clean power is produced. Bringing power to the people, at the expense of unpopular utility companies, has delivered overwhelming public acceptance. In the UK over 90% of renewable energy is owned by the big energy firms, seen as untrusted giants dumping turbines into the countryside and taking the proceeds out.

Community ownership is transformative, according to Lord Adair Turner, chair of the government's official advisers, the Committee on Climate Change. "*Rather than looking at a wind farm and saying 'that big company dumped it here to make profit', people look at it and say 'that's ours and I get some profit from it'. As a result it turns out aesthetic perceptions are deeply subjective and you say 'I rather like it' rather than 'I rather dislike it.' You can call that a bribe, or you could call it 'sharing the benefits'.*" (8)

Greenpeace, Friends of the Earth and WWF point out that a massive cut in support for onshore wind power would be a major setback for economic recovery. They say the deal struck by Chris Huhne with David Cameron to cut subsidies by 10% was justified, but slashing them by 25% would seriously jeopardise new projects, including community-owned initiatives. We're now seeing repeated calls from inside government and from business to stop the Treasury blocking green growth and provide policy certainty for the development of the renewable energy sector. (9)

Now the House of Commons select committee on energy and climate change is to investigate the economics of wind power. (10) Tim Yeo said: "*Government policy on wind power should be based on sound economics and engineering, not political pressure from a small vocal minority – whether that be green campaigners or anti-wind protestors.*" Others have identified the key vocal minority more precisely: the backbench Conservative MPs who demanded David Cameron slash the subsidies for onshore turbines. (11)

According to *The Sunday Telegraph* David Cameron and George Osborne are to come down firmly on the side of those who object to renewable energy subsidies. It says the subsidy regime for onshore wind and solar panels is now expected to be phased out by 2020. An email sent by Oliver Letwin, the Cabinet Office minister, makes it clear that financial support both for onshore wind and solar panels is expected to have "disappeared" within eight years. (12)

Ed Davey says cuts larger than 10% would unnerve investors. And a DECC spokesman moved to diffuse the apparent standoff, pointing out that phasing out subsidies is an "aspiration" of the government and its consultation on the RO states the technology is moving towards a scenario where support may no longer be needed in the longer term. His words were echoed by a spokeswoman for trade body RenewableUK, who said Letwin was expressing his opinion rather than government policy.

"*The government is keen to get costs down for all [energy] technologies,*" she told *BusinessGreen*. "*There's no rift developing – Ed Davey is committed to lowest cost, as is the industry. The repeated message from government is onshore wind is a crucial part of the future energy mix.*" (13) James Murray, editor of *Business Green*, tweeted that phasing out subsidies by 2020 would be a victory for renewables, not for anti renewable campaigners.

Alan Whitehead MP asks why March 31st 2017 is the cut-off date for the Renewables Obligation? It doesn't seem to be the best idea to switch the subsidy system when you are halfway through round three offshore wind deployment with a target for renewable for 2020 of 30GW (mostly offshore) wind. Wouldn't it make more sense to extend the RO scheme until 2020? (14)

Meanwhile, seen by some as a vote of no confidence in the government's green policies which have been thrown into doubt by reviews of subsidy levels, the world's biggest wind turbine maker has scrapped plans for a giant factory in Kent that would have created 2,000 jobs. Vestas, a Danish company, said it would no longer proceed with its flagship Sheerness project amid concerns about political support for wind power in Britain. Vestas had already filed a planning application to take over 70 hectares of land at Sheerness where a manufacturing base would have constructed large blades to meet the needs of a new generation of North Sea wind farms in deeper waters. The company's withdrawal will be an embarrassment for the Government, which had cited the Sheerness factory as evidence of new green jobs being created in the UK. Ed Davey described wind power as a "strategic industry of national importance" on which Britain's "clean energy future depends". (15)

- (1) Guardian 2nd June 2012 <http://www.guardian.co.uk/politics/2012/jun/02/george-osborne-cuts-windfarm-subsidies>
- (2) Independent 20th June 2012 <http://www.independent.co.uk/news/uk/home-news/row-erupts-over-george-osbornes-plan-for-25-per-cent-cuts-in-onshore-wind-farms-subsidy-7869892.html>
- (3) Telegraph 11th June 2012 <http://www.telegraph.co.uk/culture/hay-festival/9323003/Hay-Festival-2012-Electricity-from-wind-turbines-will-soon-be-as-cheap-as-gas.html>
- (4) Telegraph 19th June 2012 <http://www.telegraph.co.uk/earth/energy/9343063/Wind-energy-subsidies-may-be-cut.html>
- (5) Guardian 2nd June 2012 <http://www.guardian.co.uk/politics/2012/jun/02/george-osborne-cuts-windfarm-subsidies>
- (6) Independent 4th June 2012 <http://www.independent.co.uk/environment/green-living/build-more-turbines-poll-shows-public-wants-wind-farms-7814798.html>
- (7) Guardian 4th June 2012 <http://www.guardian.co.uk/environment/2012/jun/04/countryside-windfarm-bribes-wind-turbines>
- (8) Guardian 4th June 2012 <http://www.guardian.co.uk/environment/damian-carrington-blog/2012/jun/04/wind-farm-power-opposition>
- (9) Observer 10th June 2012 <http://www.guardian.co.uk/theobserver/2012/jun/10/big-issue-windfarms-renewable-energy>
- (10) House of Commons 12th June 2012 <http://www.parliament.uk/business/committees/committees-a-z/commons-select/energy-and-climate-change-committee/news/wind-1/>
- (11) Guardian 14th June 2012 <http://www.guardian.co.uk/environment/damian-carrington-blog/2012/jun/14/wind-power-turbine-energy-subsidy>
- (12) Sunday Telegraph 16th June 2012 <http://www.telegraph.co.uk/earth/energy/windpower/9336027/Subsidies-for-onshore-wind-farms-to-be-axed-by-2020.html>
- (13) Business Green 12th June 2012 <http://www.businessgreen.com/bg/news/2184997/government-denies-rift-renewables-subsidies>
- (14) Alan Whitehead MP 18th June 2012 <http://alansenergyblog.wordpress.com/2012/06/18/more-on-magic-dates/>
- (15) Telegraph 23rd June 2012 <http://www.telegraph.co.uk/earth/energy/9350440/Blow-for-green-dream-as-wind-turbine-factory-scrapped-after-ministers-wobble.html>

3. Wind Subsidies Nonsense

The Sunday Telegraph has been trying to blame fuel poverty on wind turbines:

"Subsidies paid to windpower companies are forcing up to 50,000 households a year into fuel poverty, according to analysis of government figures by the House of Commons Library. Increased electricity costs because of all subsidies paid to all renewable sources of energy have pushed 100,000

families into fuel poverty, defined as the need to spend more than 10 per cent of household income to maintain a satisfactory heating regime. Wind power payments are estimated to account for about half of these. Around 4.75 million households in Britain are thought to be in fuel poverty according to DECC.” (1)

The Carbon Brief Blog has had a look at this. This is what they've come up with:-

The total amount added to an electricity bill by payments to support renewables was £18.20 in 2010-2011 - £18 of that goes to the Renewables Obligation and 20p to feed-in tariffs.

4.75 million households in the UK were classed as being fuel poor in 2010. Between 2009 and 2010 this number fell by 750,000, from 5.5 million to 4.75 million.

Although it's not clear the House of Commons library analysis probably concluded that if the average energy bill was £18.20 lower, 100,000 less households would be spending more than 10% of their income on energy.

This seems to be missing the wider picture. Renewables Obligation costs are not rising rapidly - total costs to consumers from the RO have risen by £3 since 2009. But other factors are driving bills up rapidly. Most notably, wholesale energy prices have risen a lot, to the point where gas wholesale costs now count for over 48% of the average UK domestic energy bill, according to Ofgem. £18.20 is a relatively small amount compared to an average combined gas and electricity bill of £1,310.

Around half of renewable subsidies go to wind. Carbon Brief concludes that addressing fuel poverty should be a priority, and for some people £9 will be a lot, for others it won't. But it's clear that in a newspaper article, "50,000 households a year in fuel poverty" sounds like a much bigger deal than "£9 a year". Action for Renewables has illustrated this in a more graphic way. (3)

Damian Carrington managed to get hold of a copy of the note, written by the House of Commons Library, mentioned in *The Telegraph*. He says it's difficult to know where to start unpicking this simple-minded nonsense, but let's begin with one of the three elements of fuel poverty, energy bills themselves. Between 2004 and 2010, dual fuel bills rose by £455, of which £382 was due to soaring gas prices. That's where the real blame lies quite possibly driving a million or two into fuel poverty, and more renewable energy is the solution, not less. (4)

- (1) Sunday Telegraph 16th June 2012
<http://www.telegraph.co.uk/earth/energy/windpower/9336027/Subsidies-for-onshore-wind-farms-to-be-axed-by-2020.html>
- (2) Carbon Brief Blog 20th June 2012 <http://www.carbonbrief.org/blog/2012/06/50000-households-in-fuel-poverty-due-to-wind-farm-subsidies>
- (3) Action for Renewables 20th June 2012
<http://www.actionforrenewables.org/blog/archive/201206/it%E2%80%99s-gas-not-renewables-would-it-help-if-we-wrote-it-bigger-letters>
- (4) Guardian 21st June 2012 <http://www.guardian.co.uk/environment/damian-carrington-blog/2012/jun/21/wind-power-subsidies>

4. EMR – “UK will live to regret it”.

The attack on renewable energy subsidies should come as no surprise to those who have been following the increasingly nasty efforts by Treasury to intervene in the financing of renewables generally, says Alan Whitehead MP, a Labour member of the Energy and Climate Change Committee. Put bluntly, the Treasury doesn't like all this subsidy flimflam for renewables and doesn't see why the market can't sort it all out. All of which makes its stance on Contracts for Difference increasingly difficult to fathom. At the same time as George Osborne is throwing banana skins in the way of renewable deployment, he is, apparently sitting back and doing nothing about the longer term

(and potentially huge costs) of the CfD rollout for nuclear reactors. Not only will they get a special pre-contract contract enshrined in the new legislation but they will, it seems, get a far longer period for their CfDs than is currently envisaged for new wind.

As we reported last month Professor Steve Thomas makes some reasonable assumptions about strike price (the price producers of low carbon electricity would be guaranteed for electrical power under the contract for difference (CfD) arrangements) and the length of time nuclear contracts would be in place and concludes it will cost £155 billion over thirty years for Hinkley C and Sizewell C. Rather a lot of subsidy. The RO is going to be just over £3 billion per annum by 2015. Let's say that it 'peaks' at about £5 billion per year a little after and then starts degressing. That equates to probably £100 billion over the same period for perhaps 30 gigawatts installed, working at about 35% efficiency – almost twice as much electricity for far less money. (1)

Strike prices for CfDs are supposed to be set by competitive forms of price discovery, but according to DECC's Draft Operational Framework (2) *"for nuclear projects the strike price will be determined through an administrative price setting process until the conditions are in place to move to competitive forms of price discovery"*. (3)

Ian Marchant, the chief executive of SSE, has warned that subsidies demanded by EDF Energy to build new nuclear reactors in Britain will saddle consumers with higher bills for years to come. He outlined his concerns about electricity market reform to the Energy and Climate Change Committee. *"If the EMR [energy market reform] is passed in its current form, it's a piece of legislation the UK will live to regret,"* he said in the most outspoken attack on the Government's faltering energy policy by an industry executive to date. Mr Marchant said that the reforms were geared towards *"making nuclear fit in"* and would make investing in renewables such as wind farms more expensive. He argues that Britain does not need to build any new reactors because gas prices are cheaper, electricity demand has fallen and reactors originally due to close over the next decade will have their lifetimes extended by about seven years. *"EMR is fixing a problem we do not have,"* he said. (4)

Marchant told the Committee on June 12th he was *"very concerned"* about transparency around how the government and EDF would negotiate the 'strike price' for new nuclear power. EDF Energy is planning to take a final investment decision on building twin EPR reactors at Hinkley Point C by the end of the year, prior to the effective approval expected for EMR. The government has agreed to negotiate custom-designed CfDs on a project-specific basis prior to implementation of EMR to allow major investment projects, such as Hinkley Point C, to proceed. Moreover, in the case of nuclear generally, it is possible that all future nuclear projects may benefit from project-specific negotiations, rather than a more general technology-specific strike price, according to DECC. (5) In other words the Energy Secretary will be agreeing long-term contracts *"without any level of public scrutiny of what is being paid for, how much is being paid or why it is being paid at a particular level. Consumers will be liable to pay for contracts, potentially for up to 40 years, which they have no visibility of, and no input into"*. (6)

Marchant also questioned the proposed "capacity mechanism", a measure designed to compensate owners of coal and gas plants to provide back-up power even when the growth of low carbon power made investment in such plants riskier. *"The government has created a known-unknown,"* he said. *"They have said there will be a capacity mechanism but not what it will be."* (7)

Keith Anderson, ScottishPower head, whose group is a leading UK wind farm investor, owned by Spain's Iberdrola, said the draft legislation still lacked a large amount of critical detail, which worried investors. *"We have now got a hiatus in investment,"* said John McElroy, director of policy and public affairs at RWE Npower. He pointed to Germany as an example of a country that had made investment in offshore wind in particular attractive to investors. Others said France had made similar progress. (8)

EDF Energy CEO, Vincent de Rivaz was about the only representative of the Big Six who was positive about the Draft Energy Bill. He told MPs that “*subject to some fine tuning, we believe the [EMR] reform package is needed and will deliver*” the required private sector investment in new energy infrastructure. (9) The remaining Big Five have more or less written off the Bill as dead-on-arrival. “*As it stands the bill will not provide the confidence investors need,*” John McElroy, told the committee. According to the draft legislation, it appears government is now proposing that retail electricity suppliers would be the counterparties to the CfDs under a new statutory obligation. This would mean the retail electricity suppliers would have to collect and disburse the funds needed to pay electricity generators a guaranteed price for power, passing on the costs ultimately to electricity consumers. McElroy said the government’s role as counterparty “*is important to the cost of capital.*” Without the government as counterparty, “*that claimed cost of capital benefit is not there.*” (10)

Vincent de Rivaz barely looked up from his notes during his testimony, writes David Stellfox on i-Nuclear, probably to make it easier to stick to the script. After all, de Rivaz has a lot to lose. He’s already got the government to line up a carbon floor price, which few of his fellow energy firms wanted or believed would bring new investment, and which, as the UK’s only nuclear operator, will bring de Rivaz a windfall. He’s also on the verge of seizing a 15-, 20-, or 30-year contract for a guaranteed power price for new reactors. One careless, off-script remark could upset the whole apple cart. De Rivaz’ task is to get as much government assistance as he possibly can from the EMR to build four Areva EPR reactors, two each at Hinkley Point in Somerset and at Sizewell in Suffolk. If that means denying the reality of what is almost universally accepted — outside Whitehall and EDF corporate offices – as public subsidies, so be it. As de Rivaz drived on about how all these subsidies are not in fact subsidies, McElroy provided virtually non-stop, non-verbal commentary in reaction to de Rivaz’ script. While de Rivaz was talking, he shook his head ‘no’; he’s wincing, he’s raising his eyebrows, and at the end he guffaws. (11) (12)

De Rivaz told the Committee that “*To take our own multi-billion [pound] final investment decision for our new project, we need three clear, concrete priorities for the bill,*” de Rivaz said. “*First, moving to a tangible counterparty contractual model, which is clearly understood and precedented...Second point, insuring that the early [Hinkley Point C-specific] CfD, which will be delivered through the transitional arrangements, is legally robust for the long term; and third, working to ensure the government keeps to its original timetable of Spring next year for royal assent.*” De Rivaz did not specify why royal assent to a final bill in early 2013 is crucial to EDF’s investment decision at the end of 2012, particularly when its own CfD will have already been negotiated separately with government by then. Queried on this point and whether EDF was preparing to move back its final investment decision to 2013, an EDF Energy spokesman would only reiterate that the final investment decision is intended to be made at the end of the year. (13)

But de Rivaz told the committee the company's final investment decision on Hinkley was subject to the government putting a framework in place on time. He said: “*I think it's very clear that we will not be able to make our final investment decision, as we expect to make it at the end of the year without a contract for difference, and without a robust legal framework for this contract.*” This may mean a delay, because full details of how the reforms will work will not be in place by the end of this year. This prompted Tim Yeo to call on the Prime minister to step in urgently to rescue the UK's nuclear power programme, or risk it failing. He said Cameron must speak to his French counterpart, Francois Hollande, in order to decide what conditions are necessary for the state-owned French utility to fulfil its planned investment. (14)

Energy Secretary Ed Davey recently acknowledged doubts about the new nuclear programme. He said: “*Can nuclear consortia build power stations with no public subsidy? I don't know, we'll see.*” He added that Britain could survive without nuclear power but (confusingly) he sees it as an essential part of the country’s energy mix. (15)

- (1) Alan Whitehead MP 6th June 2012 <http://alansenergyblog.wordpress.com/2012/06/06/contracts-for-difference-the-gift-that-keeps-on-giving/>
- (2) See <http://www.decc.gov.uk/assets/decc/11/policy-legislation/EMR/5358-annex-b-feedin-tariff-with-contracts-for-differe.pdf>
- (3) Alan Whitehead MP 6th June 2012 <http://alansenergyblog.wordpress.com/2012/06/06/and-the-winner-is/>
- (4) Times 11th June 2012 <http://www.thetimes.co.uk/tto/business/industries/utilities/article3441515.ece>
- (5) i-Nuclear 12th June 2012 <http://www.i-nuclear.com/2012/06/12/sse-ceo-says-negotiation-in-smoke-filled-room-will-set-power-price-for-edfs-hinkley-point-c/>
- (6) Telegraph 12th June 2012 <http://www.telegraph.co.uk/finance/newsbysector/energy/9327801/SSE-attacks-secrecy-of-nuclear-subsidy-talks.html>
- (7) FT 12th June 2012 <http://www.ft.com/cms/s/0/59ec3510-b4af-11e1-bb2e-00144feabdc0.html>
- (8) FT 12th June 2012 <http://www.ft.com/cms/s/0/59ec3510-b4af-11e1-bb2e-00144feabdc0.html>
- (9) i-Nuclear 13th June 2012 <http://www.i-nuclear.com/2012/06/13/edf-energy-ceo-committed-to-end-2012-final-investment-decision-despite-emr-issues/>
- (10) i-Nuclear 13th June 2012 <http://www.i-nuclear.com/2012/06/13/uks-draft-electricity-market-reform-bill-rejected-by-industry-executives-as-inadequate-unclear/>
- (11) i-Nuclear 14th June 2012 <http://www.i-nuclear.com/commentary/>
- (12) The hearings are still available on the Parliament website here <http://www.parliamentlive.tv/Main/Player.aspx?meetingId=10893&wfs=true>
- (13) i-Nuclear 13th June 2012 <http://www.i-nuclear.com/2012/06/13/edf-energy-ceo-committed-to-end-2012-final-investment-decision-despite-emr-issues/>
- (14) Guardian 12th June 2012 <http://www.guardian.co.uk/environment/2012/jun/12/uk-nuclear-power-david-cameron?newsfeed=true>
- (15) FT 17th June 2012 <http://www.ft.com/cms/s/0/70f2a90e-b89e-11e1-a2d6-00144feabdc0.html>

5. EMR – the official view

Secretary of State for Energy and Climate Change, Ed Davey and Charles Hendry, appeared before the House of Commons Energy and Climate Change Committee on 26th June. (1) Davey made two rather startling revelations during questioning. Firstly he said that he expects the Energy Bill to receive Royal Assent by the end of 2013 at the latest. Yet EDF Energy has said that it wants to see Royal Assent by Spring 2014. Chairman Tim Yeo said EDF's demand for Royal Assent by Spring 2013 won't be achieved and asked Davey how that would impact government plans for new nuclear. "Our timetable hasn't changed. We haven't changed our word. EDF is very much aware of this," Davey replied. He said government's schedule "is not news to EDF." (2)

Secondly, Davey said the Government had never intended to be the 'counterparty' – in other words to underwrite the Contracts for Difference. Davey and Department for Energy and Climate Change (DECC) officials said that descriptions of the controversial CfDs in government documents that strongly implied a government backing were "badly written" and "unfortunate." Committee Members pointed out that paragraph 100 of the Impact Assessment said "*A FiT CfD ... insulates generators and consumers from both short-term volatility and the impacts of long-term price trends [because] the price risk is borne by Government balance sheets.*" (3)

Davey said that contrary to widespread belief, backing for the proposed CfDs was always based on the flow of money from electricity consumers, without government guarantees. "Some people believe we could have a single party counterparty (for the CfD) where the government is backing that single counterparty. I don't believe we need that," Davey told the Energy and Climate Change Committee. The statement from Davey and DECC officials clearly came as a surprise to the Energy and Climate Change Committee, who, along with key industry executives, believed that the government had switched from proposing a CfD contract with the government as the counterparty, implying government backing, to a CfD with multiple counterparties, namely UK electricity suppliers. Committee Chairman Tim Yeo, replied: "*Unfortunately some of us were stupid enough to rely on*

what the government published in its own impact assessment ... The Treasury had a second read of it and decided they didn't like it very much."

In testimony May 15 before the same committee, Volker Beckers, Group Chief Executive at RWE npower told the committee that the government's decision, as he saw it, to drop the idea of a government-backed CfD would provide less certainty for investors. *"There was an expectation that the CfD was backed by government. We are miles away from that now,"* he said in reference to the EMR draft bill submitted for pre-legislative scrutiny by DECC in May. *"A different path is being pursued by the government. Moving away from a triple A rated guaranteed contract (i.e., with government as counterparty) is a big shift in the process in the last six to nine months."* (4)

The Government insisted that its calculation that CFDs would reduce the cost of capital by £2.5bn was not based on the Government being the counterparty. Tim Yeo said, no-one could argue that the system proposed was as investable as a system with the Government acting as counterparty. Davey disagreed saying it is the stability of the return which lowers the cost of capital.

A question about the view of Liberal Democrat Deputy Leader Simon Hughes came up. Hughes recently told the House of Commons that the policy of not subsidising new reactors meant *"it will not happen because it has always needed to be subsidised"*. (5) Davey said he disagreed and that in his view the Contract for Difference is not a subsidy. The question of applying to the European Commission for State Aid clearance came up. The possibility that CfDs for renewable might get clearance whereas the Commission might take a different view on nuclear CfDs.

- (1) Parliament TV 26th June 2012
<http://www.parliamentlive.tv/Main/Player.aspx?meetingId=11059&wfl=true>
- (2) i-Nuclear 26th June 2012 <http://www.i-nuclear.com/2012/06/26/uk-energy-secretary-says-edf-knew-royal-assent-for-emr-by-spring-could-not-happen/>
- (3) Electricity Market Reform Impact Assessment, 12th July 2011
<http://www.decc.gov.uk/assets/decc/11/policy-legislation/EMR/2180-emr-impact-assessment.pdf>
- (4) i-Nuclear 26th June 2012 <http://www.i-nuclear.com/2012/06/26/decc-says-widespread-belief-government-would-back-long-term-contracts-for-new-nuclear-is-false/>
- (5) Hansard 16th May 2012, Column 570
<http://www.publications.parliament.uk/pa/cm201213/cmhansrd/cm120516/debtext/120516-0002.htm>

6. EMR – the alternative view

Juliet Davenport CEO of Good Energy says the whole system has been built to deliver power from a few, large, centralised power stations to millions of homes and businesses across the country. This centralisation of electrical power means that the economic and political power is centralised too. To disperse this stronghold of six players delivering 99% of our energy, we need to change the way the industry works and allow smaller players access to operate in the market place. There's no doubt that consumers want to see the energy market work differently. A YouGov survey commissioned by Good Energy earlier this year found that 71% of people are concerned that the majority (57%) of fuel used to generate electricity comes from overseas. The launch of Friends of the Earth's Clean British Energy Campaign last month revealed that 85% of people want an increase in the amount of renewable energy generated in the UK. But if politicians and voters do want to see a different market develop, the current proposals in the Electricity Market Reform is not the way to do it. It will add to the complexity of the market and make it more difficult for the non-traditional energy players such as the local authorities or communities to get involved.

This is in stark contrast to the controversial Feed-in Tariff which, while it may have given the Treasury boys sleepless nights, actually brought about a small revolution. A revolution that saw over 320,000 new entrants into the energy market – many of which were social housing projects (over two thirds of Good Energy FIT customers are social housing) – and brought energy directly to people's

homes and businesses, cutting out the bigger players. No wonder there's been such a backlash; by the back door we suddenly have hundreds of thousands of energy market players rather than just six – something any free market economist would welcome. It's also a truly inspirational view of the future for the UK energy market. (1)

The University of Exeter, SSE, Consumer Focus and WWF, along with representatives from 12 other organisations, have published the results of a series of roundtables on UK energy policy and the draft Energy Bill. This concluded that existing energy efficiency policies will fail to deliver a secure, clean and affordable power sector for the UK. Managing primary energy demand must be the centrepiece of energy policy, not an afterthought to make decarbonisation easier. The group called for measures to reduce energy demand to be given the same status under the Energy Bill as measures that seek to support the construction of low-carbon generation. The Government should use revenues generated from the carbon floor price and EU Emission's Trading Scheme auctions to fund energy efficiency measures.

The group also called for a binding 50gCO₂/kWh decarbonisation target by 2030 to be inserted in the Energy Bill, with several organisations also calling for the UK to support a binding EU 2030 renewables target. Maintaining security of energy supply means achieving a diverse mix and range of fuel sources including decentralised energy and, in this mix, renewable energy should not be classified as a single energy source. The group agreed that a wide range of system security options would be the best way to maintain system security costs effectively and sustainably, and open up potential export opportunities for the UK. (2)

- (1) Guardian 14th June 2012 <http://www.guardian.co.uk/sustainable-business/big-six-energy-production-revolution>
- (2) WWF 27th June 2012 http://www.wwf.org.uk/what_we_do/press_centre/?uNewsID=6075

7. Generic Design Assessment

NuClear News reported last month that the Office for Nuclear Regulation's latest quarterly statement on its Generic Design Assessment (GDA) of new reactor types says EDF and Areva have closed out only one of the 31 outstanding "GDA Issues" – and that the process is now substantially behind schedule. (1)

John Large of Large and Associates, an expert on nuclear safety, was commissioned to develop a detailed study of the ONR and Environment Agency's GDA of two proposed nuclear reactor designs – Areva's EPR and Westinghouse's AP1000. Large has now carried out an independent review of progress on the 30 outstanding issues still to be resolved for the EPR reactor - the AP-1000 design assessment is currently on hold. (2)

Key conclusions from Large's assessment include:

- The GDA process is significantly behind schedule, and is currently not expected to be completed until at least spring 2013, and will therefore not be ready until after the date EDF is hoping to get planning consent to construct Hinkley Point C from the National Infrastructure Directorate.
- The EPR is an entirely new design, different to anything built before in the UK, and needs to be assessed carefully and properly.
- Queries raised in the ONR report as a result of Fukushima-related stress tests, as well as a whole range of other post-Fukushima issues, have yet to be addressed.
- The ONR is critical of the Areva-EDF responses so far, commenting that some "*have been late or do not provide the quality of information or depth of evidence that we expected*".

A more detailed final assessment of the GDA will be completed by Large & Associates before the end of 2012.

John Large says: *“Our national nuclear safety regulator is being squeezed from both sides: on the government’s part it is pushing for contracts to be awarded and construction to start on the Hinkley Point reactors in January 2013 and, from the other side, the power station operator EDF just doesn’t seem to have allocated the technical resources to address the key nuclear safety issues identified in the GDA process – if the safety regulator gives into these pressures then it could compromise nuclear safety by nodding through the incomplete design.”*

The Nuclear Free Local Authorities and Stop Hinkley have called on the ONR and Environment Agency not to bow to any pressure from the UK Government or the nuclear industry to speed up the GDA process in order to advance the new nuclear build programme. It is absolutely essential that nuclear safety is not compromised in any way, particularly given the wide range of critical safety issues that arise from the Fukushima disaster. (3)

As the GDA proceeded events at Fukushima prompted the European Commission and the European Nuclear Safety Regulators Group (ENSREG) jointly to set a series of *Stress Tests* against which Member States should evaluate their reactors. For the UK stress tests ONR excluded this requirement from the GDA process so the EPR design has not been Stress Test evaluated. Instead it requires AREVA-EdF to assess any relevant design changes via an additional GDA Issue. Until the final submissions of AREVA-EdF for this particular GDA Issue have been submitted, optimistically aimed for November 2012, this broad area of uncertainty about the types and extent of modifications required to the EPR design, operating rules, etc., will remain unresolved. But the nuclear safety regulators in Finland and France did submit their respective EPR designs to the stress tests evaluation. Analysis of these Fukushima-necessitated actions adds a further 16 equivalent issues to the GDA Issues list yet to be addressed by AREVA-EdF.

The other outstanding GDA Issues range from resilience to internal hazards, adequacy of the structural integrity of the built-structures including the all-important primary containments of the nuclear island, doubts about the hardware backup of the centralised instrumentation and control systems, human factors and so on. Although limited to 31 in number, the majority of the individual GDA Issues are a composite made up of a number of often quite involved tasks to be undertaken, the outcomes of which have to be further substantiated and finally incorporated into the all-important Pres-Construction Safety Report (PCSR) – even a relatively straightforward GDA Issue, such as giving account of dropped loads within the nuclear island structures, is projected to require 5 months to completion, after which it has to be assessed and approved by the ONR.

Even the single GDA Issue which has been ‘closed out’ had two important caveats issued by ONR – known as Assessment Findings (AF). These, and all other AFs, will require resolution before construction is allowed to proceed beyond a certain point. Deferring resolution of nuclear safety topics via the AF bypass route could introduce a degree of compromise particularly if, at the post-design and manufacture milestone, the AF reveals a shortfall in the nuclear safety function that cannot be readily resolved practicably by, for example, a design change in an already manufactured or installed component and, as a result, a particular safety function is relaxed.

Large says it is almost impossible to gauge the amount of effort likely to be required to resolve the remaining issues from the information provided by ONR. There is no trail linking issues back to source documents and submissions made by Areva-EDF. Large will issue a progress report later in the year after making Freedom of Information requests.

(1) See Generic Design Assessment, NuClear News No.41
<http://www.no2nuclearpower.org.uk/nuclearnews/NuClearNewsNo41.pdf>

- (2) Large and Associates, 1st Interim review of Generic Design Assessment – Outstanding Issues, 30th May 2012, <http://www.largeassociates.com/cz3206/3206%20GDA%20Review/R3206-11.pdf>
- (3) NFLA & Stop Hinkley Joint Press Release 1st June 2012
http://www.nuclearpolicy.info/docs/news/NFLA_GDA_problems_report.pdf

8. Green growth - Labour's policy review and Tory backbench debate

Labour has launched a "fundamental and wide-ranging" green growth policy review designed to identify measures that can help stimulate the low carbon economy and create new green jobs. The review is being advised by a host of green business leaders and economic experts, including Solarcentury's Jeremy Leggett, (1) Matthew Spencer of the Green Alliance, Ecotricity's Dale Vince, Dimitri Zenghelis from the Grantham Research Institute on Climate Change, and PwC's Paul Davies, as well as Iain Wright MP from the shadow business team and Cathy Jamieson MP from the shadow Treasury team. Shadow Energy and Climate Change Secretary Caroline Flint said "*A new wave of industrial revolution is sweeping the world but Britain is being left in the doldrums. We must get on board or risk missing out.*" (2)

The argument about green growth has even reached the Tory Party. Two Conservative cabinet members, the development secretary, Andrew Mitchell, and environment secretary, Caroline Spelman, have written to the prime minister to ask him do more to boost investment in low carbon energy and other green infrastructure. And foreign secretary, William Hague, has urged David Cameron to provide more support to help green industries boost the economy, stop the UK falling behind international rivals, and avoid losing its global leadership on the environment. There will be a backbench debate on Thursday 28th June introduced by Laura Sandys MP, who has support from 25 Conservative colleagues, including the Tory eco-activist Zac Goldsmith MP. (3)

Meanwhile Sharp Solar has unveiled a plan to move its German headquarters to Wrexham, North Wales, where it already has a manufacturing plant employing 500 people, in a move which will be seen as a major boost for the UK solar power industry. (4)

Rather appropriately for the idea of a green economic revival Sunsolar has revealed plans to build a 30MW solar photovoltaics manufacturing plant in the Black Country. Sunsolar has received a £5 million Government grant backed by Sandwell Council and the Regional Growth Fund to add to a £5 million company investment. The new PV manufacturing facility will be based in Oldbury (not the nuclear site which is in Gloucestershire) and is due to be opened at the end of October creating almost 600 new jobs in the West Midlands. (5)

Anti-nuclear campaigners on Anglesey have outlined plans to regenerate the Island's economy without Wylfa B. The "Manifesto for Môn" is a bid to show there are alternatives to nuclear power generation for the island's economy. People Against Wylfa B (PAWB) says it has identified the potential to bring between 2,500 and 3,000 jobs to the island, although most of them are already in existing energy proposals. They include 150 jobs in energy conservation through insulation schemes, 300 jobs in wind energy with community turbines on-shore and support for Centrica's 600 turbine Irish Sea development. PAWB say solar and biomass could also provide 750 jobs with projects on the table in Holyhead and Llangefni, and 150 jobs could come from wave and tidal schemes. (6)

- (1) Watch this talk given by Jeremy Leggett on 10th June on 'The Challenges of Driving Disruptive Innovation in the Teeth of Opposition from Nuclear and Fossil Fuel Incumbents.'
<http://www.youtube.com/watch?v=77jmQ762hzo>
- (2) Business Green 13th June 2012 <http://www.businessgreen.com/bg/news/2183949/exclusive-labour-launch-green-economic-policy-review>
- (3) Guardian 24th June 2012 <http://www.guardian.co.uk/environment/2012/jun/24/green-energy-investment-conservatives-america>
- (4) Business Green 13th June 2012 <http://www.businessgreen.com/bg/news/2183837/exclusive-sharp-shift-entire-solar-business-uk>

- (5) Solar Power Portal 20th June 2012 http://www.pv-tech.org/news/sunsolar_to_develop_30mw_pv_manufacturing_plant_in_the_uk
- (6) BBC 1st June 2012 <http://www.bbc.co.uk/news/uk-wales-north-west-wales-18292401> and North Wales Chronicle 6th June 2012 <http://www.northwaleschronicle.co.uk/news/113225/anti-wylfa-b-group-s-3-000-job-manifesto.aspx>

9. Horizon Update

The UK government has reaffirmed its commitment to a new nuclear reactor on Anglesey during a ministerial visit to Wylfa. Energy Minister Charles Hendry told the power station's staff the nuclear industry had a positive future on the island and within the UK. (1) *"We are very positive about new buyers being found for a new nuclear plant on Anglesey. There have been significant expressions of interest in the site, which is an exceptional site."* (2)

Two Chinese nuclear firms have teamed up to take part in the bidding for Horizon Nuclear Power, which is being sold by Eon and RWE. The firms are China Guangdong Nuclear Power Corp (CGN) and State Nuclear Power Technology Corporation (SNPTC). Reuters reported that the two State-owned companies have reached agreement to work together to bid for the project. (3) If the two companies are working as a team, not in competition that would put Areva and Westinghouse back in the role of supplicants, competing for the Chinese to choose their reactors to build in the UK, assuming the Chinese are not audacious enough to propose building one of their own reactors. (4)

Other reports suggested that SNPTC has teamed up with Westinghouse to make a bid, while CGN had picked Areva to put forward a joint bid. The deadline for bids was 15th June, and Nomura, acting for the sellers, said it had received several bids. (5) CGN already uses Areva's reactor design in its Taishan power plant in China, and SNPTC has a partnership to build plants in China with Westinghouse. (6) It is rumoured that Westinghouse has a stronger financing plan in place than Areva, making it a slight favourite to snap up Horizon. (7)

The UK government is in active and positive negotiations with several parties for the sale of Horizon Nuclear Power, Lord Jonathan Marland, Parliamentary Under-Secretary of State, Department of Energy and Climate Change, told the House of Lords on June 19. At least three consortia have now come forward with bids, according to *The Telegraph*. As well as the CGN-Areva and SNPTC-Westinghouse bids, GE Hitachi is thought to have submitted a third bid, potentially with a US utility (8) and Russia's Rosatom is another possible bidder. (9)

GE-Hitachi is a US-Japanese joint venture. Its Economic Simplified Boiling Water Reactor (ESBWR) design was originally part of the GDA review process, but in September 2008, after the third-stage reviews were under way, GE Hitachi asked UK regulators to suspend work on the ESBWR saying it wanted to focus its efforts on certification of the design in the US by the NRC, which was further along. A Whitehall source told *The Independent* that *"GE Hitachi has built a lot [of reactors] so they think they could get through the GDA faster and then build faster. That may not be easy – they don't have a UK supply chain so it won't be that fast."* (10)

Rosatom, of course, would have similar problems. Its VVER reactor would have to undergo a Generic Design Assessment – a process which can take around five years. Yukka Laaksonen, vice-president of Rosatom's international branch Rosatom Overseas announced at Atomexpo-2012 that the Rosatom corporation would apply to the British and U.S. regulatory agencies to have its VVER reactor technologies certified. Laaksonen said that the Russians plan to complete standard Generic Design Assessment (GDA) procedures within five years, in order to obtain licenses for the construction of VVER reactors in the UK. Plans to apply to the U.S. Nuclear Regulatory Commission (NRC) for certification of the VVER reactor design will happen later. Even if Russia's nuclear power plant in the UK is built many years down the road, or not at all, approval by the British and American regulatory authorities will help promote VVER reactor technologies in the overseas markets. (11)

If Rosatom fails to buy Horizon, there are other sites approved as potentially suitable for new reactor deployment prior to 2025 – Bradwell, Heysham and Hartlepool. All of them are owned by EDF Energy and the most suitable among them is probably Bradwell. EDF Energy is under obligation to sell Bradwell, but the conditions attached to that obligation mean it is unlikely to do so in the near term. EDF Energy was required under an agreement with the UK government when it bought British Energy to sell the land at Bradwell to a competitor, but a condition of the agreement is that the sale will only occur after EDF achieves planning approval to build two Areva EPR reactors at Sizewell in Suffolk. (12)

- (1) BBC 18th June 2012 <http://www.bbc.co.uk/news/uk-wales-north-west-wales-18483239>
- (2) Daily Post 19th June 2012 <http://www.dailypost.co.uk/news/north-wales-news/2012/06/19/energy-minister-positive-about-wylfa-b-55578-31211841/>
- (3) Reuters 21st June 2012 <http://uk.reuters.com/article/2012/06/21/nuclear-britain-china-idUKL3E8HL4BM20120621?rpc=401&feedType=RSS&feedName=marketMovers&rpc=401>
- (4) i-Nuclear 21st June 2012 <http://www.i-nuclear.com/2012/06/22/1220/>
- (5) City AM 20th June 2012 <http://www.cityam.com/latest-news/china-set-fund-uk-nuclear>
- (6) Telegraph 19th June 2012 <http://www.telegraph.co.uk/finance/newsbysector/energy/9342680/Chinese-companies-bid-to-build-new-UK-nuclear-power-plants.html>
- (7) Independent 25th June 2012 <http://www.independent.co.uk/news/business/news/red-tape-threatens-ge-hitachis-nuclear-bid-7879799.html>
- (8) Telegraph 19th June 2012 <http://www.telegraph.co.uk/finance/newsbysector/energy/9342680/Chinese-companies-bid-to-build-new-UK-nuclear-power-plants.html>
- (9) i-Nuclear 20th June 2012 <http://www.i-nuclear.com/2012/06/20/uk-in-active-and-positive-negotiations-with-several-parties-to-sell-horizon-nuclear-power/>
- (10) Independent 25th June 2012 <http://www.independent.co.uk/news/business/news/red-tape-threatens-ge-hitachis-nuclear-bid-7879799.html>
- (11) Russia Beyond the headlines 22nd June 2012 http://rbth.ru/articles/2012/06/22/rosatom_eyes_nuclear_projects_in_the_uk_15951.html
- (12) i-Nuclear 20th June 2012 <http://www.i-nuclear.com/2012/06/20/uk-in-active-and-positive-negotiations-with-several-parties-to-sell-horizon-nuclear-power/> See also World Nuclear News 6th June 2012 http://www.world-nuclear-news.org/C-Ambitious_Rosatom_looks_to_ambitious_UK-0606121.html

10. Sellafield – Reprocessing to end, but not for six years.

The Nuclear Decommissioning Authority's (NDA's) strategic review has confirmed what has been expected for a while. The Thermal Oxide Reprocessing Plant (THORP) will complete its reprocessing contracts (both UK and overseas) and then close. Any remaining spent AGR fuel from UK reactors, including any future arisings, will be placed into interim storage pending a decision to dispose of it in a geological disposal facility. The reprocessing contracts should be completed by 2018, at which time THORP would cease reprocessing activities and enter a post-closure and clean out phase prior to decommissioning. Confirmation of the position concerning the future of THORP means there is now no safety, operational or strategic requirement to replace the existing HASTs (Highly Active Liquor Storage Tanks) estimated in 2010 to cost up to £1.5 billion. (1)

There are, however, a number of 'performance risks' that could impact on the delivery of the strategy. In other words, THORP might break down, which would be no great surprise given past experience. The NDA had previously expected to complete reprocessing contracts at THORP in 2010, but operational difficulties both in THORP and in downstream support plant, had delayed the completion of that work. Operational difficulties could result in the reprocessing of less than the currently planned amount of spent fuel by late 2018. The NDA says: "*We believe, therefore, we should continue to examine alternative options so that we can manage these risks to the delivery of our strategy.*" (2) The NDA says keeping THORP open significantly beyond 2018 would require a major, multi-billion pound investment programme with like-for-like replacement of many support facilities with little or no prospect of significant new business and hence a return on this investment.

The new HASTs were meant to replace capacity from an aging 21-tank complex that started storing the site's liquid reprocessing wastes in 1955. The tanks are used to store highly radioactive liquid wastes generated by the B205 magnox reprocessing plant and by THORP. But the NDA says its site license company, Sellafield Ltd, have determined that there are significant margins of safety and contingency with the current fleet of HASTs to complete the remaining reprocessing programmes. (3)

If THORP does shut in 2018, it means that by then all site reprocessing will have ceased because Magnox reprocessing is due to end the year before. Although a large proportion of the 10,000 strong Sellafield workforce is employed on reprocessing, the anticipated number of job losses is not as great as first expected due to more focus on removing Sellafield's high-hazard risks and increased NDA financial resources to accelerate decommissioning projects. It is also possible that the government will eventually give the go-ahead for a second Mox plutonium recycling plant. (4)

- Meanwhile the Environment Agency has confirmed that swallows' droppings from around Sellafield have been found to be radioactively contaminated. The swallows have been gorging on mosquitos that flit over the waters of Sellafield's radioactive storage ponds. (5)

- (1) NDA 7th June 2012 <http://www.nda.gov.uk/news/oxide-fuels-preferred-option.cfm>
- (2) Oxide Fuels: The preferred option, NDA June 2012 <http://www.nda.gov.uk/documents/upload/Oxide-Fuels-Preferred-Options-June-2012.pdf>
- (3) i-Nuclear 7th June 2012 <http://www.i-nuclear.com/2012/06/07/nda-confirms-closure-of-thorp-for-2018-abandonment-of-replacement-hasts/>
- (4) Whitehaven News 11th June 2012 <http://www.whitehavennews.co.uk/news/thorp-plant-to-close-in-2018-1.962043?referrerPath=home>
- (5) CORE 6th June 2012 <http://www.corecumbria.co.uk/newsapp/pressreleases/pressmain.asp?StrNewsID=302>
Guardian 8th June 2012 <http://www.guardian.co.uk/environment/2012/jun/08/radioactive-swallows-sellafield>

11. Renewable Notes

- Geothermal energy in the UK could generate as much electricity as nine nuclear power stations, according to a new report by engineering consultants Sinclair Knight Merz (SKM). The UK has enough deep geothermal resource to match 20% of electricity demand as well as enough heat for millions of homes. SKM have identified geothermal 'hotspots' in Cornwall, Weardale, Lake District, East Yorkshire, Lincolnshire, Cheshire, Worcester, Dorset, Hampshire, Northern Ireland and Scotland. Geothermal resources could provide 9.5GW of baseload renewable and 100GW of heat equivalent to the space heating demand of the UK. But the current subsidy regime does not provide sufficient incentive to develop the technology even as Energy Minister Charles Hendry flew to Iceland to sign a Memorandum of Understanding on exploring a possible new interconnector to import geothermal electricity. Subsidising geothermal technology initially would help to bring down costs rapidly as sites around the UK were developed. SKM recommended a different system of subsidy, targeting support at the exploration drilling phase. (1)
- Meanwhile an offshore wind farm opposed by US tycoon Donald Trump could help cut the cost of renewable energy production by £45 billion. Swedish electricity firm Vattenfall is facing strong opposition from Mr Trump over its proposed European Offshore Wind Deployment Centre (EOWDC) off the coast of Aberdeen which would be a world-class test facility to test technologies and drive down the cost. (2)The project is now being considered by Scottish ministers. Jason Ormiston, a senior executive with the firm, told Holyrood's energy committee that schemes such as the planned 11-turbine test site in the North Sea could help turn Scotland into a "world leader" in the renewable energy sector. (3)

- The economic payback from the offshore wind industry could see it wipe out most of the UK's current trade gap by 2030, according to the Centre for Economics & Business Research (CEBR). A more-aggressive approach to investing in the sector could reap rewards of an annual 1 per cent uplift to gross domestic product (GDP), the creation of up to 215,000 jobs and an increase in net exports of some £22.5 billion. The CEBR report – commissioned by renewables developer Mainstream Renewable Power, whose proposed projects include a 450 megawatt offshore wind farm in the outer Firth of Forth off the Fife coast – estimated that, under current investment plans, the sector will create 45,000 jobs by 2015, over 97,000 by 2020 and 173,000 by 2030. (4)
- The Department for Energy and Climate Change (DECC) has unveiled a report by the industry-led Offshore Wind Cost Reduction Taskforce, which includes 29 recommendations on how to cut the cost of offshore wind from £140 per megawatt hour currently to £100/MWh by the end of the decade. (5)

- (1) Guardian 30th May 2012 <http://www.guardian.co.uk/environment/2012/may/30/geothermal-energy-uk-power?intcmp=122>
- (2) Herald 7th June 2012 <http://www.heraldscotland.com/politics/political-news/wind-farm-may-cut-power-production-bill-by-45bn.17798141>
- (3) Scotsman 7th June 2012 <http://www.scotsman.com/news/environment/donald-trump-s-hated-wind-farm-could-help-save-45bn-1-2340118>
- (4) Scotsman 12th June 2012 <http://www.scotsman.com/business/wind-of-change-could-help-to-wipe-out-uk-s-trade-deficit-1-2349844>
- (5) Business Green 13th June 2012 http://www.businessgreen.com/bg/news/2183749/offshore-wind-sector-unveils-plan-cost-competitive-2020?WT.rss_f=Wind+-+Energy&WT.rss_a=Offshore+wind+sector+unveils+plan+to+be+cost+competitive+by+2020 and Guardian 13th June 2012 <http://www.guardian.co.uk/environment/2012/jun/13/offshore-wind-power-cost?intcmp=122>