

No.55 October 2013

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# 1. Hinkley Strike Price Deal Soon – Maybe

The Government is on the verge of completing its deal with EDF Energy to heavily-subsidise the construction of a new nuclear power station at Hinkley Point in Somerset. (1) An announcement could come before 19<sup>th</sup> October. Ed Davey, Energy Secretary, said the Government is “extremely close” to finalising terms for the £14bn station. He still insists there was no direct state aid in the package, but consumer groups are concerned customers will end up paying billions of pounds through levies on bills over the 35-year life of the deal. Treasury negotiators are said to have made concessions on power prices, profit sharing and construction guarantees to achieve a breakthrough in talks that have teetered on the brink of collapse for over a year. The Government hopes the Hinkley deal will provide the framework for other nuclear power projects under discussion with Japanese as well as Korean and Chinese companies.

The China General Nuclear Power Group (CGNPC) is expected to take a stake of up to 49% in the project. Under the deal, Hinkley Point will receive £93 for every megawatt hour it generates, almost twice the present wholesale price, for the next 35 years. The industry will say £93/MWh makes nuclear cheaper than offshore wind, which initially will receive £155/MWh. However, these wind farm subsidies last only 15 years. (2)

Any deal obviously involves an enormous public commitment, but how enormous asks Dave Toke, reader in Energy Politics at Aberdeen University? The terms matter very much, including:

1. What agreement is there about ‘underwriting’ the construction risk of the Hinkley C project;
2. What are the terms of the £10 billion guaranteed loan;
3. Is this strike price to be ‘inflation’ uprated in line with CPI or RPI? (the renewable incentives are being uprated in line with the inferior CPI);
4. Are there any provisions for altering the ‘strike’ price in future in an upwards direction?;
5. Is it not the case that the ‘deal’ will allow EDF to part-complete Hinkley C having overrun costs and exhausted the £10 billion Treasury loan and then demand more money from the taxpayer/electricity consumer to complete the project?

What is certain is that when all added together, the costs of getting energy by paying for electricity from Hinkley C are more than what it would cost people to get the same amount of electricity from renewable energy sources such as wind power and solar power, not to mention various energy efficiency possibilities. (3) Environmental group E3G has calculated that at just below £100/MWh EDF would receive £50bn in support from the Government over four decades for Hinkley. (4)

The final negotiations between the Government and EDF are focused on arrangements to share any potential cost overruns or windfall refinancing gains, according to *The Telegraph*. Ministers are considering bearing some of the construction risk for the £14bn project, in return for a lower subsidy level and a share of the spoils if a refinancing leaves EDF enjoying bumper profits.

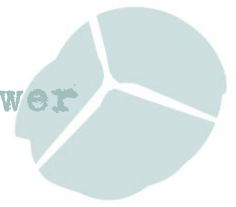


Experience tells us that the most likely outcome is that consumers will have to pay for cost overruns. (5)

Heads of terms could well be agreed within a few weeks, with key points published, before being laid before Parliament. Yet even if agreement comes, it will not be the end of the story. The project will need to clear European Union state aid approval; several requests, covering different aspects of the contract are believed to have been submitted by the Government. *“The state aid process can appear opaque,”* Chris White, partner at law firm Pinsent Masons says. If the EU decides to investigate, it may take up to 18 months to conclude. If state aid approval is denied, it is the company that is liable to repay any unjustified aid. Both EDF and the Government have long suggested that they are confident they will get approval — but there is little clarity on when that will be granted. *“It is very important that we clarify this clearance to make our final investment decision”* de Rivaz has said. Without doubt, agreement over subsidies would bring Britain’s nuclear renaissance closer than ever before. But only when state aid approval and funding are all in place and EDF takes a positive final investment decision, will we be sure. (6)

The need for the project to receive European Union state aid approval could explain why the main construction work at Hinkley is not now expected to start until mid-2015, some 18 months later than previously scheduled. (7)

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## 2. Europe and Nuclear Subsidies

The Government could face difficulties on the subsidy issue when it seeks clearance from Brussels for the Hinkley deal. EU regulations bar direct state aid and moves to relax the rules by introducing guidelines have been blocked by Germany and other states. (1)

Brussels has ditched plans to issue specific guidelines on permitted state subsidies for nuclear power. The European Commission decided to exclude nuclear power from a list of funding guidelines. An early draft raised expectations the Commission was preparing to sanction public support for nuclear power and whipped up a storm of protest, especially from Germany. (2) The Commission has decided informally to carry on investigating programmes on a case-by-case basis. This puts Britain in the uneasy position of acting as a test case for EU public subsidy rules when it seeks clearance from Brussels in the coming months. The UK is offering various support mechanisms, including a guaranteed price for nuclear power and a financing “guarantee”, to entice the private sector into building a series of nuclear reactors. (3)

Greenpeace EU legal strategist Andrea Carta said reason has prevailed: *“the Commission signaled that new nuclear energy should not receive state support. Creating a framework for subsidies to new nuclear plants would have meant encouraging investments in an already mature technology that cannot deliver energy without passing enormous costs and risks onto European citizens and the environment. We are glad that a large number of Commissioners opposed this absurd notion.”* (4)

A spokesman for EU Competition Commissioner Joaquin Almunia said the decision did not make it illegal to use public money to help finance nuclear power. *“This simply means that state aid notifications by member states will continue to be assessed directly under (EU) treaty rules and the standard in this field will be determined by the Commission’s case practice”.* (5)

A study by energy consultants Mycle Schneider Consulting published earlier this year also suggested the EU is likely to deem the Contracts for Difference (CfD) scheme that enables strike prices as state aid, meaning that the government’s plans could yet face another legal hurdle. (6) Any decision from the Commission in whether to allow the UK to subsidise new reactors is likely to take until the middle of 2014 at least.

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1. Telegraph 13th Oct 2013 <http://www.telegraph.co.uk/finance/newsbysector/energy/10376523/Deal-on-new-nuclear-near-says-Davey.html>
  2. Reuters 8th Oct 2013 <http://in.reuters.com/article/2013/10/08/wheu-nuclear-idINL6N0HY3I120131008>
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### 3. The Chinese are Coming

The China General Nuclear Power Group (CGNPC), formerly known as Guangdong Nuclear China, is hoping to secure a nuclear foothold in Britain in return for its investment in EDF's £14 billion Hinkley Point project. (1) CGNPC has made it clear to EDF that it would only invest if it is given more of a say in running other plants the two companies might build together in the UK, and the chancellor George Osborne is expected to sign a deal in China in mid-October allowing the state-owned Chinese company to build nuclear power stations in the UK.

The memorandum of understanding will also see the government express its support for China getting its nuclear technology through the UK regulatory approval process, known as the generic design assessment. It is unclear at this stage whether the reactor design will be CGNPC's, or that of another Chinese nuclear group. UK officials have apparently asked Beijing to select just one company's technology for a UK rollout. (2)

CGNPC has been looking for sites in Britain to build its own reactors and there is a possibility that EDF could sell its Bradwell site to the company. This is likely to alarm regulators and unions. Given the sensitivities surrounding nuclear power, the idea of allowing a Chinese state-backed company to take an operational role in a nuclear power station could raise a welter of national security concerns. (3) Unions are likely to try to block the move, as it is probable that most of the reactor components would have to be imported from China. The Government is risking Britain's security by wooing the Chinese according to union leaders. China has been accused of backing cyber-attacks on overseas nations to gain intelligence. Cyber-crime has been estimated to cost the British economy as much as £27bn a year. Eric Schmidt, the Google chief executive, has said China is the most "sophisticated and prolific" hacker of foreign companies. GMB national secretary for energy Gary Smith told *The Independent* that the country could not be warned about the Chinese trying to steal state secrets and then give them access to nuclear plants where they could "turn the lights on and off". He added that China had been handed "swathes of gas pipelines, water utilities and now nuclear power stations, so they will have the power to turn off utilities – it's almost Orwellian". (4)

In most countries the electricity supply system would be classified as a strategic national asset. Nick Butler in the FT says he cannot conceive of the US or France – or China or Russia – allowing a foreign country to own and control such a strategic asset. That may sound like backward-looking nationalism but it is also a matter of cold realism. Different countries have different interests and they do not always match. From time to time, there will be disagreements and even conflicts. (5) Just a few months ago a select committee of the House of Commons chastised the last government for letting a Chinese company supply some of the UK's critical national infrastructure. The report deemed it remiss of ministers not to have scrutinised more closely the terms by which Huawei supplied components to Britain's main broadband network. While producing no evidence of abuse, it warned that the "commercial imperative" of cutting costs should not trump national security. The relationship between Chinese companies and Beijing is, after all, often blurred – whether by ownership or corporate dependence on cheap state-sanctioned credit. The stretched economics of post-Fukushima nuclear power mean the UK cannot turn up its nose at potential backers, nor should it. China's economies of scale in nuclear may be the ingredient needed to breathe life into the reactor



programme. But one of the main arguments for nuclear is that of energy security. Any deal ignoring that could be costly. (6)

But Jim Armitage in The Independent says if China is willing to invest some of its wall of cash in our energy infrastructure, we should welcome it, rather than complain. There is no reason why a strong British regulatory framework and decent monitoring should not ensure a Chinese operator would be just as safe as a French, Japanese or German-owned one. However, it is crucial to get that framework right before CGNPC gets its foot in our nuclear door. (7)

Meanwhile the world's first AP1000 which is being built in Sanmen, Zhejiang province, has fallen behind schedule, and questions are being raised over its safety standards. The World Nuclear Association said on its website the construction cost of the two AP1000 reactors at Sanmen was estimated by the China Nuclear Energy Association at 40.1 billion yuan in May – 24% higher than earlier estimates. Westinghouse says the first units of Sanmen and Haiyang projects were expected to be completed in December next year, a year behind schedule. (8)

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  8. South China Morning Post 7th Oct 2013 <http://www.scmp.com/business/china-business/article/1325973/china-nuclear-plant-delay-raises-safety-concern>



## 4. NuGen

A row between the Treasury and the Department of Energy and Climate Change (DECC) could be holding up progress on building up to three new reactors on the Moorside site next to Sellafield, according to *The Times*.

A consortium led by Toshiba, owners of Westinghouse, would like to buy a majority stake in the NuGen project from Iberdrola, and GDF Suez. But, the option to build the reactors will expire in October 2014 because so little work on the project has been completed. DECC wants to extend the option to allow the deal with Toshiba to go ahead. But the Treasury is blocking the move because the Government could auction the site again if the option lapsed. E.ON and RWE, the German energy companies, raised almost £700 million when they sold their Horizon nuclear joint venture last year. The Treasury believes that the sale of the smaller Sellafield site could raise a similar sum. Energy Department officials fear that if the Treasury has its way, the construction will be delayed by two years. Toshiba has enlisted the backing of State Nuclear Power Technology Company, China's nuclear technology developer, but it also faces competition from Rosatom, the Russian state nuclear group. (1)

In September it was reported that Toshiba was close to buying Iberdrola's 50% stake in NuGen and was keen to buy some of GDF Suez's stake. However, the FT reported that a Toshiba NuGen deal might still stumble because of internal politics at the Japanese industrial giant. The future of its Westinghouse nuclear division has been under question since Fukushima, partly because Toshiba was one of the makers of the wrecked reactors. Hisao Tanaka, the new group chief executive, remains unconvinced about the Toshiba's global nuclear ambitions. (2) However, Toshiba aims to decide on whether to go-ahead with buying NuGen by the end of this year. (3)

Winning a majority stake in NuGen would give Toshiba a foothold in pro-nuclear Britain, where Hitachi Ltd, Japan's other nuclear technology supplier, acquired the Horizon nuclear project last year and is planning to build two to three nuclear power plants. With Westinghouse, Toshiba is also currently bidding for reactor orders in Poland, Hungary and Bulgaria, while also seeking contracts in India, Saudi Arabia and other Middle Eastern countries. Toshiba has said it is committed to maintenance at the Fukushima plant, but a system it installed to treat contaminated water from the damaged reactors, known as the Advanced Liquid Processing System, is still not running a year after it was introduced due to glitches. (4)

The NuGen joint venture between Iberdrola and GDF Suez struck a deal to buy the Moorside site at Sellafield in Cumbria in 2009, signing an option agreement with the Nuclear Decommissioning Authority (NDA) and committing to reach a certain level of progress by a deadline. The joint venture plans to build up to 3.6 gigawatts of new nuclear capacity at the site. For the site alone, NuGen paid an initial £19.5m and agreed to pay another £50.5m over six years, or more than £8m per year, but neither the government nor NuGen would reveal details of the deadline or the progress required due to commercial confidentiality. But if reopened for auction, the site is likely to attract strong interest as a cheap option for investors to secure a British nuclear new-build site. (5)





China's State Nuclear Power Technology Company (SNPTC) is also considering joining NuGen with Toshiba as a financial partner provided it receives assurances from Whitehall that it will one day be able to build Chinese-designed nuclear stations in Britain. SNPTC is building the first version of its new reactor, the CAP 1400, in China. It is understood the company wants a government pledge that it will help guide the new design through Britain's regulatory approval process. (6)

See also CORE Briefing on Nugen 30<sup>th</sup> September 2013

<http://www.corecumbria.co.uk/newsapp/pressreleases/pressmain.asp?StrNewsID=323>

Meanwhile Russia's state-owned atomic energy corporation Rosatom has teamed up with Finnish utility Fortum and UK-based Rolls-Royce to explore opportunities for the construction and operation of VVER nuclear power plants in the UK. The companies will work together preparing to submit the VVER reactor design to the Office for Nuclear Regulation for a generic design assessment. The UK government and Rosatom have also signed a Memorandum of Understanding to facilitate this commercial work. (7)

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  7. Modern Power Systems 8<sup>th</sup> Sept 2013 <http://www.modernpowersystems.com/news/newsrosatom-announces-collaboration-in-uk-nuclear-new-build>





## 5. Energy Costs Crisis: Tories want to frack our way out

Britain is now in the unusual position of having its three main political parties all in favour of new nuclear reactors after the Liberal Democrats Conference voted for what *The Guardian* called 'a historic reversal of their long-held opposition to atomic energy'. (1) Meanwhile Labour Party leader Ed Miliband has promised to freeze energy prices for 20 months if he gets elected in 2015, catapulting the price of energy to the top of the political agenda. In response the Tories appear to be considering cutting subsidies for low carbon electricity and energy efficiency paid through energy consumers' bills. Energy Minister Michael Fallon says the Government is contemplating scaling back its environmental commitments to help stem rapid price rises in gas and electricity. (2) Chancellor George Osborne's latest wheeze is to propose using tax receipts from fracking to fund these environmental levies so they can be removed from consumers' bills. (3)

Over the past few months climate change scepticism appears to have been on the rise amongst Tories, and Osborne thinks it would be stupid to commit billions of pounds to renewables now when we could soon have a plentiful source of energy under the ground at a fraction of the price – shale gas. *The Times* says a year ago Cameron sided with Nick Clegg against the Treasury to secure a deal on environmental charges ahead of publication of the Energy Bill. Now the Prime Minister is backing his Chancellor as he senses voters feeling the squeeze. (4) But by refusing to give any price guarantees for wind energy beyond 2020 or agree to a 2030 decarbonisation target, the Tories are putting off a lot of renewable investors and effectively strangling the large-scale development of an off-shore wind manufacturing base in the UK. (5)

Energy is becoming the most divisive issue within the Conservative Party, according to Michael Liebreich CEO of Bloomberg New Energy Finance. On one side are those concerned about climate change and convinced renewable energy holds the key to future prosperity. On the other are the climate sceptics convinced that the right combination of tax relief and shale gas will enable the UK to reclaim its glory days as an energy exporter. (6)

Liebreich says it is hard to discern any conservative principles at all behind the current government's energy policies: an Electricity Market Reform bill which enshrines high, state mandated prices for renewable energy, nuclear power and even back-up gas capacity; a Green Investment Bank that takes state allocation of capital to its most extreme form; a Green Deal which bribes people to implement energy efficiency with their own money; and most recently the award of monopolistic 15 year contracts to manage smart grid data and communications. The belated realisation that none of this speaks to concerns about rising energy bills resulted in a policy forcing utilities to reduce the choices offered to consumers.

Liebreich says the big mistake of those concerned about climate change has been to leave unchallenged the assumption that these are the only tools available to drive the transition, instead of coming up with good conservative solutions, but he doesn't suggest what these solutions might be apart from a deep reform of the European Emissions Trading Scheme.



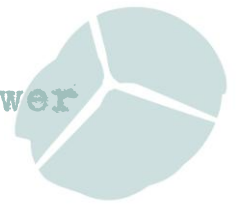
Tory campaigners on climate change are embarking on a fight-back against sceptics on the right of the party. Green Tories realise they need to recalibrate their message to respond to consumers struggling with rising energy bills. A first step in the fight-back was taken by Greg Barker, the climate change minister, who says the government will help drive down energy costs by prising open the energy market to challenge the “big six” suppliers. “*The big six need to become the big 60,000.*” (7) Barker has restated his personal ambition to see 20GW of solar deployed in the UK by the next decade. We could achieve that huge figure by covering just 14% of our industrial and commercial roof spaces with increasingly efficient solar photovoltaic panels. He also wants to see combined heat and power (CHP) plants, particularly in larger industrial, commercial and retail premises help to supersize our local energy economies. (8)

Cameron, on the other hand, seems to have shifted in Osborne’s direction. Writing in *The Telegraph*, he said: “...fracking has real potential to drive energy bills down”. (9) Owen Paterson, the climate sceptic Environment Secretary, also says a fracking boom in the UK would lower energy prices. (10) [He also told a fringe meeting at the Tory Party Conference that climate change might have its advantages. (11)]

But the Department for Energy and Climate Change (DECC) is refusing to back his claim that gas prices will fall as a result of shale gas development. Internal DECC memos reveal unwillingness within the department to reinforce the Prime Minister’s appeal to energy consumers to tolerate fracking in return for the possibility of lower gas prices. (12) And Lord Stern, author of the hugely influential Stern review on the financial implications of climate change, has dismissed claims that a fracking can bring down the price of gas in the UK as “baseless”. (13) Cameron’s comments were also shot down by David Kennedy, head of the Committee on Climate Change - the government’s official adviser - who said that “fundamental economics” showed bills were unlikely to fall. (14) And evidence submitted by Bloomberg New Energy Finance to the House of Lords Economic Affairs Committee says shale gas will not be a panacea for bringing down gas and electricity bills – costs are likely to be 50% to 100% higher than in the US. (15)

Ed Davey, the Liberal Democrat Energy Secretary, says the benefits of fracking might not be felt for another decade. And his chief scientific adviser, David MacKay, has called for more evidence on fracking’s methane emissions and for tight regulation. (16) Davey says fracking is not a “great evil” and can act as a bridge to a “green future” in the UK as long as it is properly regulated. He said Britain can extract shale gas without endangering the country’s climate targets. But David Mackay warns that exploiting shale gas in the UK will cause global greenhouse gas emissions to rise unless there is an international deal on climate change. Emissions from shale gas are about the same as from imported liquefied natural gas. But if shale gas displaces LNG imports, does that gas become cheaper and get burnt by someone else increasing emissions elsewhere? (17) And once you start thinking globally, more shale gas use could mean there’s more coal for other countries. The US shale boom has meant the UK has been taking advantage of cheap surplus coal in recent years. And that could mean UK shale gas production actually causes a global emission increase. (18)

The government is currently banking on new nuclear generation and carbon capture and storage (CCS) technology to provide large chunks of low carbon energy in the future. But it is taking a big risk if it fails to ensure there’s enough investment for a renewable energy “Plan B” according to a report, from think-tank Policy Connect. The report says if 16GW of nuclear and



CCS fail to materialise we could need renewables to provide between 45 and 55% of the UK's total generation by 2030. Putting in the groundwork now for a renewables-reliant energy system would take some of the pressure off delivering large amounts of new nuclear and CCS - neither of which is certain. (19) While Ed Davey agreed the country should increase the amount of renewable energy on the grid, he ruled out a renewables-only strategy over policies to pursue "all forms of low carbon generation", including nuclear power.

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  19. Carbon Brief 4<sup>th</sup> Sept 2013 <http://www.carbonbrief.org/blog/2013/09/report-says-government-needs-decarbonisation-plan-b/>



## 6. Liberal Democrats Orwellian Newspeak

If we look more closely at the motion agreed at the Liberal Democrats' Glasgow Conference we can see that if Liberal Democrat Ministers stick to a normal interpretation of its meaning, then new reactors would be no more likely to get built now than they were before the vote. The only way Energy and Climate Change Secretary Ed Davey can go ahead with new reactors is by redefining the crucial words using Orwellian Newspeak. (1)

The option agreed at Conference by 230 votes to 183 was to accept *'that in future, nuclear power stations could play a limited role in electricity supply, provided concerns about safety, disposal of radioactive waste and cost (including decommissioning) are adequately addressed and without allowing any public subsidy for new build'*.

Fiona Hall MEP argued during the debate that the motion is based on a false premise because the coalition's plan to make voters pay for nuclear power through their energy bills is tantamount to a subsidy. *"If it looks like a subsidy and smells like a subsidy, it is a subsidy,"* she said. Duncan Brack, a former Special Advisor to Chris Huhne said the party's idea of allowing limited nuclear without subsidy is a "chimera" because it would be impossible. Other speakers called it a "fantasy" or a "myth".

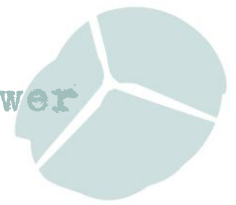
Yet Davey said he was absolutely determined not to sign any contract for new nuclear power stations which relied on public subsidy: *"New nuclear must be cost-competitive. We will not repeat the history of mistakes on nuclear."* Craig Bennett, policy director at Friends of the Earth, called Davey deluded if he thinks new reactors can go ahead without public subsidy. But he's not delusional, he is re-writing the language so that we are all forced to accept his Orwellian Newspeak definition of the word subsidy. After the vote one Brussels commentator said the outcome was based in part on "blatant lies" by Davey regarding state aid.

Unfortunately Davey is not alone in his use of the Newspeak dictionary. Energy Journalist Tim Probert points out *"all three main parties back nuclear without subsidy yet also support EDF getting a 35yr feed-in tariff for Hinkley Point C"*.

A guaranteed price of £95 per Megawatt hour (MWh) for nuclear electricity from Hinkley Point C over 35 years, if linked to inflation would yield accumulated revenues to EDF of around £143.5 billion. (2)

But the use of Newspeak isn't just restricted to the subsidy issue. In July, Davey told *The Guardian* that: *"The waste from new nuclear will take up less volume – that would mean a slightly larger geological waste disposal facility than was needed anyway."* He was also reported to have used the phrase "far less waste" at a fringe meeting at the Conference. But Davey knows that volume is not the important criteria when discussing the amount of waste produced by new reactors – it is the radioactivity and the heat generated that is important. (3)

The Government's Committee on Radioactive Waste Management (CoRWM) estimated that a programme of ten new AP1000 reactors would increase the amount of radioactivity held in all nuclear wastes by 265% - in other words almost tripling the radioactivity. (4) The Nuclear Decommissioning Authority have told Davey that a 10GW programme of new reactors would



roughly double the size of the "repository footprint" – the area underground taken up by waste. A 16GW programme – the Government's rather ambitious target - would increase the footprint by up to three times. (5)

Andy Atkins, Executive Director of Friends of the Earth, says there's some merit in the view that things would have been worse without the Liberal Democrats in the Coalition Government. Agreeing the fourth carbon budget – setting 2027 emission-cutting targets – and securing short-term cash for renewable projects, owe much to Lib Dem pressure. But faced with coalition partners prepared to ditch their environmental credentials as a sop to an increasingly vocal right wing it's clear Lib Dems aren't fighting nearly hard enough to hold the green line. Voting against a 2030 Energy Bill decarbonisation target – against party policy and provoking the largest back-bench rebellion since tuition fees – was a notable low point. (6)

On a brighter note, the Liberal Democrats became the first major party in the UK to back the Energy Bill Revolution campaign calling for carbon revenue to be used to fund a much bigger energy efficiency programme to insulate all the homes of the fuel poor. The campaign, which has the support of over 150 major charities, businesses and unions across the UK says there is enough carbon revenue to make over half a million fuel poor homes super energy efficient every single year. The Treasury will raise £60 Billion in carbon revenue over the next 15 years but at the moment not one penny is recycled back to help people to insulate their homes. (7)

Speaking after the release of the latest International Panel on Climate Change (IPCC), Ed Davey launched a thinly veiled attack on George Osborne who has suggested the UK should not be at the forefront of tackling climate change. The IPCC study warned the world would face nearly inevitable warming of more than 2°C within 20 to 30 years if greenhouse gas emissions remained at current rates, resulting in rising sea levels, heatwaves, droughts and more extreme weather. Davey said the UK should take a leading role in helping the EU to set strong CO<sub>2</sub> targets, reiterating a call for the EU to halve its emissions by 2030 compared to 1990 levels. (8)

Davey, though, is opposing a new renewable energy target for 2030. He argues that the market should be free to decide which energy technologies are used to make the cuts and wants to be free to pursue other low carbon energy options, such as nuclear and carbon capture and storage technology. (9) He used a key fringe meeting at the Liberal Democrat conference to launch a stout defence of nuclear power. He insisted that nuclear power is crucial to stop climate change. *"A lot of environmentalists who were anti nuclear in the past have changed their view because of climate change,"* he said. (10)

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1. Spinwatch 16th Sept 2013 <http://www.spinwatch.org/index.php/issues/climate/item/5542-ed-davey-s-nuclear-newspeak>
  2. 4 Traders 18th June 2013 <http://www.4-traders.com/EDF-4998/news/EDF--Fixed-Electricity-Price-for-New-UK-Nuclear-Would-Be-Linked-to-Inflation-Sources-17028766/>
  3. Guardian 5<sup>th</sup> July 2013 <http://www.theguardian.com/politics/2013/jul/05/davey-minister-nuclear-power-hinkley-point>
  4. CoRWM ( 17th January 2006) Inventory Summary Information , Doc 1531 <http://webarchive.nationalarchives.gov.uk/20130503173700/http://corwm.decc.gov.uk/assets/corwm/pre->



nov%202007%20doc%20archive/plenary%20papers/2006/25%20-%2026%20january%202006/1531%20-%20inventory%20summary%20information.pdf

5. **Nuclear Waste Advisory Associates August 2010** [http://www.nuclearwasteadvisory.co.uk/wp-content/uploads/2011/05/Inventory\\_presentation\\_to\\_WCMRWS\\_Aug2010.pdf](http://www.nuclearwasteadvisory.co.uk/wp-content/uploads/2011/05/Inventory_presentation_to_WCMRWS_Aug2010.pdf)
6. **Liberal Democrat Voice 11<sup>th</sup> Sept 2013** <http://www.libdemvoice.org/the-independent-view-conference-2013-lib-dems-must-stand-up-for-the-environment-36115.html>
7. **Energy Bill Revolution 16<sup>th</sup> Sept 2013** <http://www.energybillrevolution.org/media/liberal-democrats-back-energy-bill-revolution>
8. **Business Green 2nd Oct 2013** <http://www.businessgreen.com/bg/analysis/2298018/davey-now-is-not-the-time-to-go-wobbly-on-climate-change-george>
9. **Carbon Brief 6<sup>th</sup> Sept 2013** <http://www.carbonbrief.org/blog/2013/09/franco-german-stubbornness,-a-skeptical-parliament,-and-prime-minister-miliband-three-barriers-to-an-eu-2030-climate-target/>
10. **Guardian 18th September 2013** <http://www.theguardian.com/sustainable-business/nuclear-power-uk-future-energy-mix>





## 7. Can Ed freeze prices and save the climate?

Ed Miliband has made a seemingly impossible promise. Energy bills will be frozen while the UK invests billions to stop burning gas and coal for power. He will also legislate for a 2030 decarbonisation target for the electricity industry. Up until now we've been led to believe that bills will either go up because of rising gas prices or they can go up to fund new wind-farms, and, of course, nuclear reactors. Now politicians are trying to find a way out of this equation.

The Tories hope that fracking will flood the market with cheap gas. The Lib Dems often argue that energy efficiency will be so effective, so quickly, that households won't even notice the extra costs. Neither idea currently looks like it will work, says Greenpeace's Damian Kahya in the New Statesman. (1) So how will Miliband square the circle?

Underlying the seemingly intractable problem is a silent assumption that all the costs of energy policy should be paid for almost entirely through bills which makes it hard to freeze bills and invest billions at the same time. It's also highly regressive because poorer consumers tend to pay more per unit of energy since they are much more likely to be on higher-tariff prepayment meters, and they are more likely to live in badly insulated houses. The costs of greening the energy system are supposed to be largely offset by policies to improve energy efficiency, which will protect the vulnerable. But this assumes that energy efficiency programmes will be able to successfully target poorer households, and experience suggests this is quite difficult.

Some of the costs levied on bills go straight to the Treasury. The government's Carbon Price Floor, for example, drives up the cost of power, supposedly in a (so far unsuccessful) attempt to make coal more expensive than gas. It's expected to raise around £2bn for the Treasury by 2017, and more after that. Miliband could scrap it - replacing it with regulation to phase out carbon emissions from coal plants. Or he could use the money to pay for efficiency schemes and support the Energy Bill Revolution campaign. (2)

He could move some of the costs of energy policy from consumers' bills to taxation, arguably a fairer way to pay for new infrastructure since it would enable the government to protect the most vulnerable people in society such as the fuel poor. One way to do this would be to underwrite loans for efficiency projects at low rates of interest - something the Germans already do. Loans for the government's Green Deal energy efficiency scheme start at around 6 or 7%.

Luciana Berger, Shadow Minister for Energy and Climate Change until the recent reshuffle, says Labour would forge ahead with delivering the energy efficiency by replacing the failing Green Deal with a new 'Energy Save' scheme. She says they will be consulting with the insulation industry in the months ahead on how best to offer cheaper loans, drive take up through minimum standards and target support for the fuel poor by redirecting £1.3bn of ECO funding into an area based scheme. (3)

Kahya says cutting costs can't just be about taking risk away from the private sector, or switching the burden away from bills. It could also be about challenging the perceived monopoly of the big six utilities and institutional investors by encouraging the UK's regions and individuals to invest in its new energy infrastructure. By comparison, in Germany most of the investment in clean energy comes from individuals and local authorities and not the





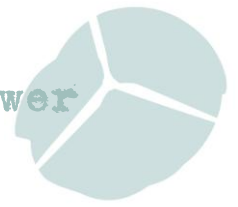
transnational energy giants. This needn't be just about village based community projects. Why shouldn't the City of Newcastle, for example, be an investor in the wind farm which provides it with power and jobs? Local projects, backed by residents through crowd-sourcing schemes, cooperatives or local authorities may also face fewer delays, driving down costs. And if local authorities, communities or individuals invest in clean energy then the returns go back to those communities - opening up the potential for the money to be used to cut bills further. Recent research suggests that community energy could grow to 89 times its current size if existing barriers were lowered. There is much to learn from the way other countries whose companies own our energy providers are developing their own community energy and renewables at a fast pace, while the UK suffers. (4)

A more radical alternative would be to step outside of the box of assuming that low-carbon energy policies must be financed by passing their costs through to consumers or taxpayers. Why not rethink the way we finance green energy investments? A few of the utilities have argued for shifting this burden from consumers to taxpayers. Matthew Lockwood a senior research fellow at the Energy Policy Group, University of Exeter argues for funding it from long-term public borrowing. Borrowing to invest now in order to provide a liveable world for our children and grandchildren is surely responsible borrowing, much more so than borrowing for almost any other purpose. (5)

Craig Bennett of Friends of the Earth says while Labour is broadly supportive in a number of key green areas, they haven't built the environment into an overarching and convincing narrative. The party says it wants to decarbonise the economy, yet they remain pro-fracking and make little mention of the need to burn less fossil fuel. Miliband should make it clear that a Labour government would stop throwing subsidies and tax breaks at energy firms to extract even more dirty fossil fuels. The party leadership should be constantly challenging the coalition's wretched green record. Labour could and should champion the real, transformational solutions – from a serious attempt to bring down energy-use through a nationwide home insulation programme, to helping every school, hospital or community harness its own green energy. Some Labourites whisper these ideas; it's time to shout from the well-insulated rooftops. (6)

So who will scare off investors more, Ed or George, asks Alan Whitehead – a Labour MP on the Energy and Climate Change Committee. (7) There were predictable howls of protest from the Big Energy utilities about Labour's plans for a price freeze. The plan provoked warnings of blackouts, job losses and a threat by Centrica to leave Britain. (8) Nobody is going to invest in energy renewal – whether green, nuclear or old-fashioned hydrocarbon – as long as there is the threat of price controls, according to *The Telegraph*. (9)

Damian Carrington, on *The Guardian* website, says it's a myth that the price freeze will obliterate the many billions of investment needed to rebuild the UK's energy infrastructure. There is a hiatus in investment at present, but that is because the coalition refuses to put in place any certainty after the cliff-edge in 2020 when all clean energy targets end. Miliband has committed to making the UK's electricity carbon-free by 2030, unlike the coalition. It will be good for the economy, good for consumers, good for most businesses – except the big six – and good for the environment as well. Co-operative energy has welcomed the price freeze. The big six will blink first because they have blown it. Like many corporate giants they have spent too long dragging their feet, sweating assets and protecting the status quo, instead of getting ahead of the curve. (10)



Alan Whitehead highlighted a letter from a number of global ‘investors in the energy sector’ who said it was George Osborne’s removal of a decarbonisation target from the Energy Bill that risked the ‘£110bn overhaul of Britain’s energy network’. Most investment will have to come from non-Big Six companies, and they won’t be affected by a retail energy price freeze. (11)

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1. **New Statesman 8<sup>th</sup> October 2013** <http://www.newstatesman.com/politics/2013/10/milibands-challenge-can-you-freeze-energy-bills-and-cut-carbon-same-time>
  2. **See** <http://www.energybillrevolution.org/whats-the-campaign/>
  3. **Independent 26<sup>th</sup> Sept 2013** <http://www.independent.co.uk/voices/comment/ed-milibands-radical-reforms-will-make-the-energy-market-work-for-the-many-rather-than-the-few-8841995.html>
  4. **Letter from Ed Mayo et al to the Guardian 25<sup>th</sup> Sept 2013**  
<http://www.theguardian.com/politics/2013/sep/25/ed-miliband-energy-labour-future>
  5. **IPPR 26<sup>th</sup> Sept 2013** <http://www.ippr.org/juncture/171/11321/paying-for-climate-policy-the-case-for-long-term-public-borrowing>
  6. **Guardian 23<sup>rd</sup> Sept 2013** <http://www.theguardian.com/environment/2013/sep/23/ed-miliband-labour-coalition-green>
  7. **Alan whitehead MP 1<sup>st</sup> Oct 2013** <http://alansenergyblog.wordpress.com/2013/10/01/scary-ed-or-scary-george-investors-choose/>
  8. **Times 25<sup>th</sup> September 2013** <http://www.thetimes.co.uk/tto/news/politics/article3878378.ece>
  9. **Telegraph 24<sup>th</sup> Sept 2013** <http://www.telegraph.co.uk/finance/newsbysector/energy/10332110/Ed-Milibands-flagship-policy-is-populist-but-crazy.html>
  10. **Guardian 25<sup>th</sup> Sept 2013** <http://www.theguardian.com/environment/damian-carrington-blog/2013/sep/25/energy-energy>
  11. **Alan whitehead MP 1<sup>st</sup> Oct 2013** <http://alansenergyblog.wordpress.com/2013/10/01/scary-ed-or-scary-george-investors-choose/>



## 8. ECO Chop?

If any of the carbon saving levies on energy bills does get the chop, the Energy Company Obligation (ECO) will probably be the first. Utilities say the ECO scheme is poorly designed, inefficient and will inevitably drive up bills. (1) The Chancellor could announce that he is delaying the over-engineered "ECO" scheme which obliges energy companies to spend £4.5bn by 2015 on insulating people's homes. Allowing an 18-month delay would provide financial savings that the energy companies could pass on to consumers. (2) But will this mean for the government's plans to reduce greenhouse gas emissions and tackle fuel poverty if it goes down the drain?

The drive to counter the Labour leader's new policy could see cuts to the £1.3bn annual spending on ECO. But any attempt to water down or end the Eco, which is set to run until 2015, will meet stiff opposition from the Liberal Democrats. The energy companies have told the government that the programme could add as much as £100 a year to household power bills. That is nearly double the costs the energy department forecast for the Eco when it launched. They want the government to review the programme to make sure it is cost-effective and does not inadvertently make fuel poverty worse. (3)

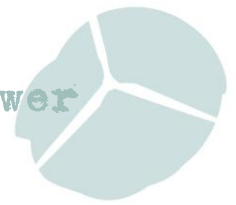
ECO requires energy providers to seek out low-income households and consumers on benefits, and subsidise home insulation. Although government has introduced programmes to tackle fuel poverty and subsidise energy efficiency in the past, ECO represents a new approach. It's meant to complement the Green Deal by requiring energy companies to reach out to the households that are in the most need or need more complicated measures installed.

The industry continues to argue that ECO is working out more expensive than the government predicted, and is therefore driving up energy bills, but according to IPPR the data shows that many companies are in fact delivering the programmes under cost. While some energy companies have struggled to locate recipients for energy efficiency programmes, others have managed to do so much more effectively - indicating that high costs may not have been all the government's fault.

The UK's housing stock is amongst the least energy efficient in Europe. It's widely acknowledged that fixing our leaky houses has to be a central part of plans to reduce the UK's greenhouse gas emissions. ECO's focus is meant to be on difficult measures like external wall insulation, but there are still plenty of cavity walls and lofts to be insulated. The Government was expecting the Green Deal to be used for these cheaper measures, According to IPPR Eco will only deliver 26% of the cuts achieved by previous schemes and 40% of what could be achieved if cavity wall insulation and loft insulation were used instead.

A variety of commentators - including the Local Government Association - have proposed that local councils need to be centrally involved in measures to tackle fuel poverty. IPPR also suggests that ECO might work better if it is focused on specific geographical areas, because economies of scale would make the measures cheaper.

Guy Newey from right-leaning think-tank Policy Exchange says the scheme could be relaxed to allow cavity wall insulation or loft insulation instead of more difficult measures. That would



probably be an easier way to achieve cost-effective decarbonisation - but it would involve the government admitting that the Green Deal isn't doing the job. Alternatively, the government could make the scheme easier (and presumably cheaper for energy companies) by relaxing the criteria for who's eligible. (4)

The National Insulation Association (NIA) is calling for urgent reforms to the Green Deal and ECO to ensure hard pressed families receive home insulation this winter. The Green Deal and ECO have the potential to provide insulation measures to millions of homes but they are currently not delivering as expected. Cavity wall installations are 65% down and solid wall insulation over 70% down. Urgent reforms are needed. (5)

The Tories hopes of countering Miliband's Energy Price Freeze by scrapping some of the green levies Miliband himself introduced look doomed after a meeting of the Quad – the Coalition's senior decision-making body – at which the Lib Dems set themselves against this plan. (6)

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1. Telegraph 28<sup>th</sup> Sept 2013 <http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/10341792/Red-Ed-Miliband-sparks-green-war.html>
  2. Telegraph 28<sup>th</sup> Sept 2013 <http://www.telegraph.co.uk/finance/comment/kamal-ahmed/10341921/George-Osborne-should-delay-green-targets-to-cut-energy-bills.html>
  3. FT 6<sup>th</sup> Oct 2013 <http://www.ft.com/cms/s/0/9a121d06-2d19-11e3-8281-00144feab7de.html>
  4. Carbon Brief 10<sup>th</sup> Oct 2013 <http://www.carbonbrief.org/blog/2013/10/nearly-everyone-hates-eco-but-how-else-can-we-make-houses-more-energy-efficient/>
  5. NIA Press Release 10<sup>th</sup> Oct 2013 <http://www.nationalinsulationassociation.org.uk/media-and-information/>
  6. Daily Mail 13<sup>th</sup> Oct 2013 <http://www.dailymail.co.uk/debate/article-2457091/JAMES-FORSYTH-A-meagre-slice-cake-birthday-boy-Dave--prezzie-Nick.html>



## 9. Energy Bills

You could be forgiven for thinking that energy bills are increasing primarily because of government imposed 'green' levies, but you'd be mistaken. The overwhelming reason is that fossil fuels are getting more expensive and after two decades of underinvestment by energy companies in the UK's now creaking energy system we have a steep bill to catch up. It therefore follows that the best way to keep bills down is getting off the fossil fuel hook and dramatically improving the nation's appalling level of energy efficiency.

The 8.2% price rise announced by SSE provides the perfect illustration. SSE's own figures, analysed by IPPR, show the rise equates to £93 a year. £23 is due to rising wholesale energy costs and £28 for investment in the grid and meters. VAT adds £5 and another £23 is unaccounted for, but will include SSE's own costs. Only one sixth – £15 – is due to the rise in "green taxes". (1)

Meanwhile, writing in *The Guardian* Brenda Boardman, says there are between 3.5m and 5.3m households in fuel poverty in England, and it's getting worse. Does parliament not care? Our elected representatives passed the Warm Homes and Energy Conservation Act 2000, which created a real sense of hope because it set out a strategy to eradicate fuel poverty by 2016. But that strategy has woefully failed: fuel poverty is growing, not being eradicated. It appears that an act of parliament can be ignored if the government decides there is insufficient money available, and since 2008-09 it has been cutting the funds for Warm Front, the primary policy on energy efficiency. It has now been scrapped altogether. Freezing fuel prices, or lowering them, would help. However, the real solution is to make the homes of the fuel-poor more energy efficient. At the moment, they have to buy expensive heat, because most of the heat they create quickly flows out of the house, through cracks and poorly insulated fabric. If the home is properly insulated and made energy efficient, they can buy cheap heat, because they need so much less of it – it stays indoors with them.

All the time fuel prices have been rising, the government has been receiving an increasing amount of VAT and keeping it. These receipts have risen by at least £1bn a year since 2004. Also, the major utilities participate in a European Emissions Trading Scheme (EUETS), which now requires them to go to auction to buy permits to emit carbon. This is bringing in a further £4bn a year for the Treasury. So there is £5bn sitting in the government coffers that could be used to help the fuel poor, without adding to the costs of their fuel bills. The government has not been trying to find ways to deliver the strategy. Instead, it has focused on redefining fuel poverty (which results in cutting the numbers) and on working towards a new strategy, that will be published shortly before the general election. (2)

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1. Guardian 10th Oct 2013 <http://www.theguardian.com/environment/damian-carrington-blog/2013/oct/10/green-taxes-energy-bill-fuel-sse-price-rising>
  2. Guardian 9th Oct 2013 <http://www.theguardian.com/commentisfree/2013/oct/09/fuel-poverty-worse-ed-miliband>



## 10. Radiation and Health

Dr Ian Fairlie has given an initial response to the new Bithell et al study on childhood leukemias near nuclear power stations. The Bithell study said children who live near UK nuclear power plants have no greater risk of developing leukaemia or a type of cancer known as non-Hodgkin lymphoma.

Contrary to many other studies, the new report fails to find an increase in leukemias and non-Hodgkin lymphomas near nuclear power stations. However the authors admit that their negative findings are not statistically significant and that their study is statistically underpowered compared with many other studies, especially the powerful KiKK study, which did find increases. The normal rule is that weak epidemiological studies which are not strong enough to pick up effects should be careful about making negative conclusions, as this one does unfortunately.

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### 1. Dr Ian Fairlie 15<sup>th</sup> Sept 2013

<http://www.ianfairlie.org/news/leukemias-near-nuclear-power-stations-new-study-by-bithell-et-al-september-2013/>



# 11. Review of the Siting Process for a Geological Disposal Facility Consultation

A longer version of this briefing can be found here:

[http://www.nuclearpolicy.info/docs/radwaste/Rad\\_Waste\\_Brfg\\_43\\_MRWS\\_Siting\\_Consultation.pdf](http://www.nuclearpolicy.info/docs/radwaste/Rad_Waste_Brfg_43_MRWS_Siting_Consultation.pdf)

## Introduction

The June 2008 White Paper on “A Framework for Implementing Geological Disposal” (1) set out an approach to the siting of a geological disposal facility (GDF) based on voluntarism and partnership. This process failed, partly because of the intractability of the nuclear waste problem, but also because of the Government’s refusal to accept most of the recommendations of its own advisory committee – the Committee on Radioactive Waste Management (CoRWM).

The new proposals, set out in the latest consultation document (2) represent a highly counter-productive move back to centralised control, whilst continuing to pay lip service to voluntarism. To many it will look like a thinly disguised attempt to change the rules so a new site selection process can start in West Cumbria despite opposition from the County Council. To quote one correspondent to *The Whitehaven News*:

*“...it is a brazen, shameless, unlawful and outrageous attempt to usurp our democratic rights to get the result they want ... [a] pathetically transparent attempt to re-launch MRWS as a national process. Government has been obsessed with siting the GDF in West Cumbria since the 1980s and is intent on rigging the process and also cooking the geological books to achieve this.”* (3)

## The Government should scrap this consultation and go back to the drawing board.

### Priority should be storage

The scope of this consultation is focussed solely on finding a site for a geological repository. This looks very rushed with a steering group and consultative partnership formed in areas where there may be a reasonable prospect of finding suitable geology in as little as two years from now.

The clean up and management of existing legacy wastes especially at Sellafield is clearly a more immediate priority. As CoRWM pointed out, given the uncertainties surrounding the implementation of geological disposal, there needs to be a focus on the safe and secure management of wastes in robust interim stores, not just for the period while we await the opening of a GDF, but also because of a risk of delay or failure in the repository programme. The possibility storage might be required for the long term or even indefinitely needs to be considered. The Government should instead be consulting on strategies for interim storage and the implications new reactors will have for long term storage, including the need to find appropriate and secure locations for spent fuel stores into the far future.





CoRWM was clear – the deep ‘disposal’ of radioactive waste is far from a proven technology. It recommended an intensified programme of research and development into the long-term safety of geological disposal, but also a robust programme of interim storage.

It is currently not possible to demonstrate with any scientific credibility that radiation doses to people from a GDF would be at an acceptably low level into the far distant future. There are simply too many uncertainties about how packaged nuclear waste will behave underground. For instance, it is possible that radioactive carbon in methane could breach acceptable dose limits on the surface after that repository has been closed for just 40 years. (4)

### Openness and transparency a prerequisite

CoRWM also recommended a process in which stakeholders and the public had confidence with a high level of engagement, openness and transparency to ensure continuance of and a building on that confidence. The Government has manifestly failed to implement this. The first step in any new process must be to develop a comprehensive programme of research and development into examining the uncertainties of disposal, and improving robust interim storage. Technical and scientific uncertainties as well as ethical issues should be examined in a process which is accessible and open to scrutiny.

The consultation document says the UK Government is keen to explore options for more effective engagement with NGOs and other groups, some of whom may be opposed to the implementation of geological disposal, and that NGOs may be prepared to provide a constructive challenge function in the process, helping to ensure that it is robust. Without a clear commitment from the Government to organise an independent and unbiased process which covers all sides of the argument this is simply consigning all those sceptical about geological disposal to a backwater without even the promise of funding to act as a critical voice in the process.

In Sweden, any Non Governmental Organisation above a certain size can apply for funds from the Swedish Waste Fund established by the nuclear industry to monitor and become involved in the final repository project. The Swedish NGO Office for Nuclear Waste Review (MKG) was set up by a coalition of environmental organizations in 2004. MKG is participating in the consultation process, but aims to provide a critical voice.

### What do we want geology to achieve?

Most people would be astonished to learn that the Government is not searching for the best geology which can achieve maximum containment of radionuclides. This was a key factor in Cumbria County Council’s decision to withdraw from the process. Its leader, Eddie Martin said “*The key question for us, however, is whether or not Cumbria is the optimum location.*” (5)

The Government’s view is that “*there is no ‘best’ or ‘most suitable’ generic type of geology*” and that “*engineered elements can be tailored*” to meet the requirements of different geologies. (6) It was clear in the West Cumbria Managing Radioactive Waste Safely Partnership Report that RWMD is only looking for a site which is “*sufficiently good*”. RWMD’s view is that “*although characterising and demonstrating safety is more challenging for a comparatively complex site* [as



sites in West Cumbria would be geologically speaking] *than for a simpler site this does not prevent complex sites from being considered*". (7)

Prof David Smythe, (Emeritus Professor of Geology at Glasgow University) on the other hand, says West Cumbria is, by any objective scientific standard, completely unsuitable. There are vast regions in eastern England where a suitable repository site could be found, either in thick clay or in hard crystalline rock below flat sedimentary layers. Nirex listed 537 UK sites in 1988, but the Sellafield site selected by Nirex for investigation in 1991 was not on the original list.

There is clearly a fundamental disagreement between those who feel we only need to find a site with mediocre geology and can then rely more heavily on engineered barriers, and those who think we should be looking for a site with excellent properties for containing nuclear waste into the far future. There should be a national debate about whether we are looking for the best geology for the job or whether we are happy to use mediocre geology and rely more heavily on engineered barriers. This could be started by asking BGS to weigh up West Cumbria against other UK regions - something the 1997 Nirex Inquiry Inspector asked for.

### **Do we know enough about the science to make a safety case?**

Geological disposal purports to involve immobilising radioactive waste within multiple, engineered barriers, and then isolating it deep inside a suitable rock formation to ensure that no harmful quantities of radioactivity ever reach the surface environment. But radioactive chemicals can migrate from a repository by dissolving in underground water or by being carried to the surface through rock fractures as a gas. This involves complex chemical and geological processes. The government and its agencies have so far failed to demonstrate an ability to gather sufficient accurate information to enable a sufficiently rigorous calculation of the extent to which radioactive chemicals will escape – and hence they are unable to provide a robust evaluation of the safety and give the assurances on health and environmental contamination communities require.

It is impossible to demonstrate with any scientific credibility that radiation doses to people from a nuclear waste repository would be at an acceptably low level into the far distant future, if we can't be sure how nuclear waste will behave underground. For instance, methane and carbon dioxide will be produced in bulk in a GDF and the extent to which these gases are radioactive will depend on how much radioactive carbon is in the waste. Originally it was thought that these gases would combine with cement placed around waste drums, but now it is thought that this won't happen with methane. This serves to illustrate the huge uncertainties involved in estimating the behaviour of radioactive chemicals underground.

RWMD has listed 900 outstanding scientific and technical issues, which need to be resolved but because 400 of these were internally raised and work on resolving them is already in-hand they were removed leaving 500 issues listed in a March 2012 RWMD report. (8) The process of resolving the 900 issues needs to be much more open and transparent.

### **“Representative Authority”**

The consultation document is, to all intents and purposes, conflating the idea of “community” with the phrase “representative authority”.



We know that during the previous process that out of 88 local and parish councils in Copeland and Allerdale, 53 expressed a view on moving on to the site selection phase of the process with only 8 in favour and the rest against. (9) The West Cumbria Managing Radioactive Waste Safely Partnership carried out an opinion poll which found that a small majority of those asked were in favour of moving on to the next stage. But 19% of those asked had never heard of the proposals; and 61% had either just heard of it or knew ‘just a little’ about it. (10)

The system being proposed is one in which a steering committee made up of the “representative authority”, RWMD and the Government could decide to go-ahead with very limited support from an ill-informed population. The establishment of a hierarchical system with all other organisations such as Parish Councils and the County Council relegated to a consultative committee will not work. If the process is to achieve widespread community support, all levels of government and civil society need to be part of the decision-making process rather than simply being consulted.

Public support needs to be measured on the basis of informed consent. Excluding the County and Parish Councils from the Steering Group will make it impossible for the representative authority to demonstrate *informed* public support.

District Councils and representative authorities should also be in a position where they are fully informed about the issues. Representative authorities should not just have to show community support, but also need to show that they and their community are supporting the project on the basis of informed consent, rather than simply being attracted by the idea of a community benefits package.

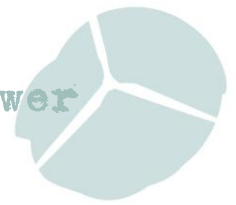
The idea, suggested in the consultation document, that because District Councils have full-time staff they can somehow become better qualified to make a judgement on a highly complicated area of scientific controversy is absurd, particular in this era of public spending cuts. Communities asked to consider any kind of highly complex technological development, such as a GDF, should be funded so that they can obtain independent and impartial scientific advice rather than being forced to rely on the advice given by those working to support the development. As well as local (Parish, District and County) councils this should also apply to grassroots community organisations and NGOs.

### National Public Awareness Campaign

The Government is proposing a “*national public awareness and engagement programme*” to ensure “*a greater general awareness and understanding of the issues, leading to a more balanced and well informed debate on GDF across the country*”. This will supposedly allow potentially interested community representatives to find out more from the Government and RWMD, without the risk of pressure to take early decisions.

This public awareness programme is to be followed by a ‘learning phase’. The description of this in the consultation document only mentions the “representative authority” learning from Government and RWMD.

Deep geological disposal is not only highly controversial, but also an area of huge scientific uncertainty. Public awareness programmes and “*learning phases*” are in danger of being seen as



simply indoctrination campaigns if all the learning is from one side of the debate represented by the Government and RWMD.

It is the Government and its agency RWMD that wants to build a GDF. Any public awareness campaign needs to be organised by an independent body, not the developer, and should be carried out on the basis that all sides of the debate are represented fairly with equal resources.

### Waste Inventory

The Secretary of State for Energy and Climate Change Davey told *The Guardian* in July that: “

*The waste from new nuclear will take up less volume – that would mean a slightly larger geological waste disposal facility than was needed anyway.”* (11)

This is a biased way of presenting the information, and, in fact the second part of the statement is factually incorrect. A proper analysis would show that volume is not the important criteria when discussing the amount of waste produced by new reactors – it is the radioactivity and the heat generated that is important. The Government’s Committee on Radioactive Waste Management (CoRWM) estimated that a programme of ten new AP1000 reactors would increase the amount of radioactivity held in all nuclear wastes by 265% - in other words almost tripling the radioactivity. (12) The NDA says that a 10GW programme of new reactors would roughly double the size of the “repository footprint” – the area underground taken up by waste. A 16GW programme – the Government’s rather ambitious target - would increase the footprint by up to three times. (13)

It is proposed that the NDA should advocate geological disposal as an essential enabler for its decommissioning and waste management responsibilities. The phrase “*essential enabler*” implies that decommissioning and waste management work will in some way be delayed if a GDF does not go-ahead. The NDA’s role should be to stop producing new waste as quickly as possible, and to develop robust interim storage facilities for waste already created or which is unavoidable, not to make up excuses for rushing into geological disposal.

The Baseline Inventory used until now did not include waste (or spent fuel) from new reactors. Nor did it include military waste or spent fuel. The West Cumbria Managing Radioactive Waste Safely Partnership was, however, presented with an Upper Inventory which included waste and spent fuel from a 10GW new reactor programme as well as additional materials owned by the Ministry of Defence. (14)

The Government is now proposing to produce a revised Baseline Inventory should comprise the following waste and material types:

- ILW arising from existing nuclear licensed sites, and medical, industrial, research and educational uses, in England and Wales;
- That small proportion of LLW not suitable in a low level waste repository;
- HLW from Sellafield reprocessing operations;



- ILW and irradiated fuel (and any LLW not suitable for disposal in a low level waste repository) from the defence programme in England and Wales, and from sites in Scotland not covered by the Scottish Higher Activity Waste Policy;
- Spent Fuel from existing reactors; Sizewell B and AGRs (noting that some AGR SF will be reprocessed) and from legacy sites such as Sellafield and Dounreay;
- Uranium stocks;
- Spent Fuel (oxide) and ILW from a new build programme of a specified maximum size, such as the 16GW(e) for which nuclear operators have developed proposals;
- Spent Fuel (MOX) from conversion of the UK's plutonium stocks plus any residual plutonium not suitable for fuel manufacture.

The Government believes this should give potential communities the most complete possible picture of the inventory for disposal and give confidence that it will not expand materially over time.

The Government also says that because it has identified that its preferred approach for plutonium is to reuse it in the manufacture of mixed-oxide fuel (MOX) for use in reactors, it is now able to be clear that for the most part plutonium will not be disposed of in a GDF.

The previous concept was that there would be an agreed mechanism for updating the Baseline Inventory, so if any new waste was planned to be included this would be discussed with the host community. The Partnership produced a paper with a range of principles on the inventory, including principles for defining an acceptable process for inventory change and how the community could influence this. (15) The logical consequence of the Government's plan to produce a Baseline Inventory which includes more or less everything that might be disposed of in a GDF is that it will also remove the community's say on the waste inventory that it will play host to.

Secondly, the new Baseline Inventory will further sideline CoRWM's recommendation that:

*"New build wastes would extend the timescales for implementation, possibly for very long, but essentially unknowable future periods. Further, the political and ethical issues raised by the creation of more waste area quite different from those relating to ... unavoidable wastes ... **a new build programme ... would require a quite separate process to test and validate proposals for the management of wastes arising**". [emphasis added] (16)*

In July 2013 the Secretary of State for Energy and Climate Change told *The Guardian* he is confident that a site for the waste can be located democratically. He said: "... we already have huge amounts of waste left over now from the first two generations of nuclear reactors and from the military programme. We have to deal with that whether we build one single new nuclear reactor or not. It has to be dealt with."

So the UK Government is prepared to allow a new programme of nuclear reactors to go-ahead which will produce waste with a radioactive content more than three times the waste we have already created on the basis of the Secretary of State's optimism that one of the most



complicated scientific and technical projects ever undertaken can be made to work. On the other hand CoRWM's view was that although there are huge uncertainties concerning deep disposal for security and safety reasons it was worth a shot for waste we have already created. But the idea of creating new waste under these circumstances is extremely ethically dubious.

The Government should produce a baseline inventory which does not include new build reactors and a Maximum Inventory which shows the impact of a 16GW new build programme. It should enshrine in any future process the principle that any community willing to host nuclear waste facilities should get a say in the inventory of waste committed to those facilities.

### National significant infrastructure planning

The UK Government believes there are clear advantages to using the nationally significant infrastructure planning regime for the development of a GDF (in England). This would mean that the Planning Inspectorate would consider any development consent application for a GDF in England and make a recommendation to the DECC Secretary of State. The DECC Secretary of State would then make the ultimate decision on whether to grant or to refuse planning consent.

The Government says that it would require a demonstration of community support before development could proceed.

The Government proposes to publish a National Policy Statement, specifically for a GDF. A 'generic' (i.e. not site-specific) National Policy Statement would be developed shortly after the revised siting process is launched. The National Policy Statement would set out the assessment principles against which applications would be considered, together with background information on geological disposal, and how it is to be implemented in the UK. It would not consider specific potential sites or areas. The Government also wants to bring intrusive site investigations within the definition of a 'Nationally Significant Infrastructure Project' so that applications for test drilling would be considered by the Planning Inspectorate.

All this is, of course, necessary to remove planning powers from County Councils. The Government, of course, insists that the developer of a GDF is required to consult, but that is not the same as playing a part in the decision-making process. It represents a highly counter-productive move back to centralised control, whilst continuing to pay lip service to voluntarism.

### An alternative approach

The Labour MP for Copeland, Jamie Reed says "*there is no Plan B for the West Cumbrian economy without nuclear support*" (17) He says Cumbria's plans "*need to include three new nuclear reactors (on land just north of Sellafield at Moorside), a new Mox facility at Sellafield, and an underground repository*" (18) The industry and government likes to give the impression new nuclear developments are the only way to provide enough jobs in West Cumbria. In this age of austerity the community benefit system proposed adds to the impression for the local population that they have no alternative but to accept a GDF. There may well be other parts of the country where industrial decline will also push local communities into reluctantly accepting developments they would rather live without.

In order to assist communities to make a decision on nuclear waste proposals on the basis of informed consent, the Government should fund local authorities in the area to research and





publish an alternative economic plan similar to the plan produced by Friends of the Earth West Cumbria and North Lakes called “Towards a Sustainable Cumbria”. (19)

## Conclusions

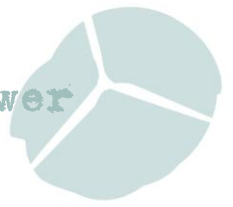
- The Government’s proposals, set out in the latest consultation document represent a highly counter-productive move back to centralised control, whilst continuing to pay lip service to voluntarism. This consultation document should be withdrawn and the Government should go back to the drawing board.
- The previous process failed partly because of the intractability of the nuclear waste problem, but also because of the Government’s refusal to accept most of the recommendations of its own advisory committee – the Committee on Radioactive Waste Management (CoRWM).
- CoRWM recommended a high level of public engagement in any future process. This was ignored.
- The scope of this consultation is focussed solely on finding a site for a geological repository when the priority should clearly be the development of robust interim storage.
- There should be a national debate about whether we are looking for the best geology for the job or whether we are happy to use mediocre geology and rely more heavily on engineered barriers.
- RWMD has listed 900 outstanding scientific and technical issues, which need to be resolved. The process of resolving these issues needs to be much more open and transparent.
- Any assessment of community support for a radioactive waste proposal needs to be on the basis of informed consent. The idea that because District Councils have full-time staff they can somehow become better qualified to make a judgement on a highly complicated area of scientific controversy is absurd. Funding needs to be provided so that Councils can commission independent advice and so that NGOs can provide a critical voice.
- Any public awareness campaign needs to be organised by an independent body, not the developer, and should be carried out on the basis that all sides of the debate are represented fairly with equal resources.
- The Government must drop the idea of using the nationally significant infrastructure planning regime for a GDF.
- The Government should produce a baseline inventory which does not include new build reactors and a Maximum Inventory which shows the impact of a 16GW new build programme. It should enshrine in any future process the principle that any community willing to host nuclear waste facilities should get a say in the inventory of waste committed to those facilities.





- The Government must re-visit CoRWM's idea of a separate process which can examine the ethics of produce more waste in the face of the uncertainties involved with nuclear waste management.
- Communities faced with proposals for nuclear waste facilities in their vicinity should be funded to produce alternative economic strategies so that no-one has to decide to accept such a facility because they feel there is no alternative.

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  2. Consultation: Review of the Siting Process for a Geological Disposal Facility, DECC September 2013 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/239237/Consultation\\_Review\\_of\\_the\\_siting\\_process\\_for\\_a\\_GDF\\_FINAL.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/239237/Consultation_Review_of_the_siting_process_for_a_GDF_FINAL.pdf)
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## 12. Sellafield Notes

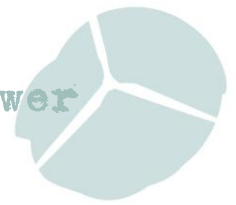
The Sellafield Workers Campaign (SWC) launched its manifesto for the growth and sustainability of the nuclear site at the end of August – and the 10,000 people who work there. In the document, *Sellafield at the Heart of a Low Carbon Energy Future*, SWC calls on the government to “*maintain a clear and unequivocal commitment*” to the site, and outlines how it hopes this can be achieved. The campaign is specifically calling for three main points to be addressed. Firstly to ensure there is nuclear new-build at Sellafield. Secondly to effectively re-use the stockpile of plutonium currently stored at Sellafield, and finally to begin a new search into a geological disposal facility (GDF). (1) Unite union national officer Kevin Coyne said without the investment, Cumbria would become an “*economic wilderness*”.

Dr Ruth Balogh, of West Cumbria and North Lakes Friends of the Earth, rejected suggestions that Cumbria needed a new nuclear plant. She said: “*They are wrong about the ‘economic wasteland’. The decline of jobs at Sellafield is not a steep decline. We need to really grasp that Sellafield is a nuclear waste facility and we have to look after it properly.*” FoE has published a report that suggested Cumbria could produce enough renewable energy to meet the population’s demands without the need for new nuclear developments. (2) Cumbria does not face an economic wilderness without new developments at Sellafield. According to Cumbria Vision, the current 10,000 jobs at Sellafield will take 14 years to fall by 1,800 without new-build. (3)

Nuclear Management Partners (NMP) — made up of Britain’s Amec, the American company URS and Areva, of France - has been forced to hand back thousands of pounds worth of expenses incorrectly claimed by executives. The claims included £2,795 for flights to the US Masters golf tournament, rooms for 17 unidentified people that cost more than £3,000 and a £2,316 Apple computer. The most eye-catching claim was a £714 taxi bill for the repatriation of an executive “and the cat”. (4)

NMP has been awarded a five-year extension to its £1.6 billion annual contract, despite being criticised for running behind schedule and over budget on nuclear clean-up work. Unions and MPs reacted with shock. Margaret Hodge, chair of the Public Accounts Committee, told *The Independent* that the Nuclear Decommissioning Authority (NDA) will “have a job justifying” the decision to hand NMP a new five-year deal. NMP were found by the committee to have been behind schedule on 12 of 14 major projects at the Cumbria site last year. An industry source said: “It’s surprising that this decision has been reached given the well-documented failings of the consortium, which to date has provided questionable value to the taxpayer.” Gary Smith, the GMB union’s national secretary for energy, added: “This is an ideological and a bad decision, but we need to move on and focus on [sorting out] the site.” Ms Hodges’ committee will meet the NDA and NMP in early November to discuss the failings of the contract so far. This is expected to take a whole afternoon, when these sessions usually last around 45 minutes. (5)

The Independent is full of the shock being expressed at the new contract for Sellafield companies. This is not shocking, says Radiation Free Lakeland. What is utterly shocking is that these companies are being employed by the taxpayer to disperse radioactive waste to the environment in order to clear the decks for more. (6)



Meanwhile, the NDA has been accused of keeping plans secret to ship a consignment of bomb-grade nuclear fuel from Dounreay to America by Cumbrians Opposed to a Radioactive Environment (CORE). CORE asks why the proposal was not mentioned by the NDA in a recent consultation on how to deal with the stockpile of so-called “exotic” fuels at the Caithness site. CORE say there was not even an “oblique reference” to the material, which arrived at Dounreay in 1999 from the former USSR state of Georgia. But the NDA yesterday hit back, pointing out that there was no reference as it did not own the fuel. The quango insists all the stockpile of exotic fuel – a mixture of unirradiated plutonium and highly enriched uranium and spent fuel – it owns at Dounreay will be transported to Sellafield in north-west England. (7)

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## 13. Renewable Notes

The politicians are wrong – 100% renewable energy is possible, says Dr Nafeez Ahmed, executive director of the Institute for Policy Research & Development writing on *The Guardian* website. If Miliband wants to beat the Big Six and deliver energy price freeze promise, he must fix his party's broken policies first.

While the government's energy policies are in utter disarray, what Labour has on the table is hardly much better, and unlikely to support Miliband's grand promises unless he backs his words with policy gumption. Although shadow chancellor Ed Balls gave a heart-warming speech to the Green Alliance this July promising to "end the current uncertainty" around renewables by putting low-carbon future at the centre of policy, this obfuscated the fact that Labour has not closed the door on fracking. Last December, shadow energy secretary Caroline Flint, said: "*Fracking should only go ahead if it is shown to be safe and environmentally sound.*"

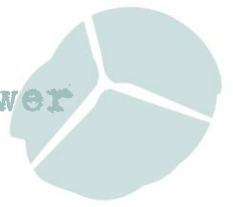
Yet the Committee on Climate Change found that investing in renewable energy, as opposed to a new 'dash for gas', would be the cheapest option for keeping the lights on while cutting greenhouse gas emissions. Investing in renewable energy was the best option even if shale gas prices were relatively low.

The fact is that a transition to a 100% renewable energy system in the UK, if not the world, is perfectly possible with the political will according to numerous studies. In 2010, the renewable energy company Good Energy mapped out a pathway for a 100% renewable energy future within the next four decades. The following year, this vision was vindicated by another report by independent energy consulting firm Ecofys, concluding that a global transition to a 100% renewable energy infrastructure was feasible by 2050 if combined with efforts to increase energy efficiency and reduce waste. If Miliband wants to freeze energy prices in 2015, he needs to start by fixing Labour's fundamentally broken energy policies first. Until then, his seemingly bold promise amounts to the same stale brand of empty rhetoric touted by the incompetent incumbents he opposes. (1)

Given the rate at which solar costs are falling, new nuclear reactors could become obsolete before they are even switched on according to Andrew Birch, chief executive of Sungevity, a solar company in San Francisco. Politicians must be careful not to lock Britons into 20th century energy prices." (2)

There are plenty of ways of managing intermittency in renewables without resorting to expensive backup power. First, you improve your resource forecasting. Second, by interconnecting the grid over larger areas, much of the variability of renewable energy can be evened out. Third, just when an increased proportion of renewable energy means you start losing control over supply, the introduction of digitally controlled smart grids gives you better control of demand. Finally, there is power storage, currently mainly in the form of pumped hydroelectric power but, in future, most likely in the form of batteries for electric vehicles. The cost of each of these techniques is coming down just as rapidly as the cost of renewable energy. (3)

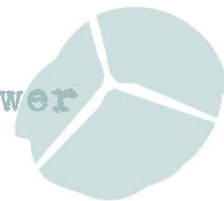
A special focus of recent disinformation on renewables has been reportage on Germany's efficiency-and-renewables revolution. The impressive success so far of the German *Energiewende* (energy turnaround) is important because Germany is cloudy, high-latitude, heavily industrialized, highly competitive (it rivals America's merchandise exports with one-fourth its population), and the world's



fourth-biggest economy. Amory Lovins has looked at some of the myths surrounding the Energiewende in a new briefing. (4)

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## 14. Radioactive Particles

The Nuclear Free Local Authorities has published a report on radium contamination at Ministry of Defence and other sites. This report focuses both on the local issues relevant to the ongoing remediation of the Dalgety Bay site in Fife and the wider issues around radium contamination. (1)

The report briefly mentions radioactive particles released into the sea from historic practices at Dounreay which continue to be deposited on local public beaches and therefore continue to present a risk to members of the public using these beaches. It also mentions that there has been renewed interest since around 2007 in particulate contamination on beaches near Sellafield which have raised again a debate about whether members of the public should be warned about particles by the use of signs on beaches, or whether this would needlessly damage the tourist trade when the Health Protection Agency (now Public Health England) has declared the overall risk to beach users is very low. (2)

Although the HPA concluded that "*No special precautionary actions are required at this time to limit access to or use of the beaches,*" the Agency did say that "*monitoring and retrieval should be continued – with emphasis on frequented areas*", and that there should be "*an urgent review of health risks to beach users*" if certain conditions are met. (3)

The HPA seems to have decided against implementing precautionary action running counter to the Government's environmental principles, especially given the uncertainties surrounding this issue, such as for example the likelihood of a small child putting sand in its mouth which contains a particle when playing on the beach.

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1. The Radium Legacy and other contamination problems, NFLA Briefing No.42 October 2013. [http://www.nuclearpolicy.info/docs/radwaste/Rad\\_Waste\\_Brfg\\_42\\_Dalgety\\_Bay\\_%26\\_the\\_wider\\_radium\\_legacy.pdf](http://www.nuclearpolicy.info/docs/radwaste/Rad_Waste_Brfg_42_Dalgety_Bay_%26_the_wider_radium_legacy.pdf)
  2. Radioactive Particles on West Cumbrian Beaches – the case for the provision of signs to advise the public CORE August 2013 [http://www.no2nuclearpower.org.uk/wp/wp-content/uploads/2013/08/CORE\\_Review.\\_Radioactive\\_Particles\\_and\\_the\\_case\\_for\\_Beach\\_Signs.\\_August\\_2013.pdf](http://www.no2nuclearpower.org.uk/wp/wp-content/uploads/2013/08/CORE_Review._Radioactive_Particles_and_the_case_for_Beach_Signs._August_2013.pdf)
  3. "Health Risks from Radioactive Objects Found in the Vicinity of the Sellafield Site". (HPA report CRCE-018 by Brown and Etherington) [http://www.hpa.org.uk/webc/HPAwebFile/HPAweb\\_C/1296685585268](http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1296685585268). And "Supportive Information for the Assessment of the Health Risks from Radioactive Objects Found in the Vicinity of the Sellafield Site". (HPA report CRCE-018 Supplement by Oatway et al). [http://www.hpa.org.uk/webc/HPAwebFile/HPAweb\\_C/1296685586018](http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1296685586018)