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1. Hinkley: A Huge Contribution Towards Yesterday's Energy Thinking

The Government's plan to guarantee EDF Energy an index-linked price for electricity from the two new nuclear reactors at Hinkley Point C in Somerset at roughly double the current market rate has, unsurprisingly, gone down like a lead balloon.

EDF Energy will be guaranteed £92.50 for each megawatt hour (MWh) of electricity generated for 35 years, ensuring billions of pounds for the French, mostly state-owned company. The difference between the wholesale cost and this minimum price agreed will be funded by a levy on household energy bills. If EDF also goes ahead with plans to build two more reactors at a second site at Sizewell in Suffolk, the subsidy will be lowered to £89.50. (1)

As we head into another winter, rising energy prices have already become the latest political battleground. We can expect around 24,000 avoidable deaths from cold-related illnesses in England and Wales alone (2) and seven million households plunged into fuel poverty. (3) So for the Government to gamble that wholesale electricity will cost double the present level for 35 years seems at best, bizarre. (4) But after years of half-truths and nuclear spin it is hardly a shock.

Mark Todd, director of independent price comparison service energy helpline, said:

"What it does show is that the Government believes electricity costs are set for dramatic increases over the next 10 years. This would take a typical electricity bill from £559, as it is today, to £1,108 a year."

But ministers insist the new plant will mean the average energy bill will be £77 lower by 2030 than it would be without it, although Ed Davey admitted he cannot guarantee a better deal for consumers due to "inherent uncertainties" in the energy market. (5) Former government energy adviser Tom Burke said the deal could pile on more than £1bn in indirect subsidies rather than lowering bills: *"In order to set the strike price, the government has had to guess what the electricity price would be in 2058, which is impossible. This deal relies on wholesale prices continuing to go up. If they go down, consumers will have to make up the shortfall, which could add up to more than £1bn per year"*. (6)

In 2006 EDF said its nuclear electricity would cost £28.80/MWh in 2013 values. (7) The Coalition Government promised there would be no subsidy for new reactors, and Energy Secretary, Ed Davey, is still insisting that paying £92.50/MWh is not a public subsidy (8) when almost everyone outside of Whitehall and EDF has long since given up on such a pretence. Tom Burke asks why, if there is no public subsidy, the Government needs to apply to Brussels for state aid clearance for this deal? (9) Meanwhile we are expected to rely on Davey's optimism that dangerous nuclear waste will be dealt with, despite plans for a disposal site being forced back to the drawing board. (10)



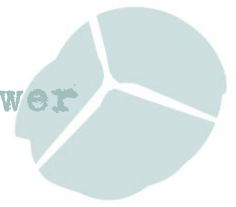
The high cost of building reactors makes them dicey investments, says *The Economist*. (11) As well as agreeing a premium price for electricity, the Government will guarantee some of the loans needed to build the £16bn twin reactors. French energy expert Bernard Chabot says the strike price would have to be closer to £100/MWh without the loan guarantee. (12) Government projections assume that rising fossil-fuel prices will eventually make energy from Hinkley Point look cheap. They also depend on politicians raising Britain's carbon price, while hoping that energy-saving schemes will hide the rising costs from consumers. The deal at £92.50/MWh might look cheaper than the £155/MWh which the government promises offshore wind farms (falling to £135 in 2018). But those are 15-year contracts, not a 35 year commitment. Renewable energy is getting cheaper, while nuclear plants have always got more expensive.

The *Daily Mail* reminded us about the various disastrous attempts to build an EPR reactor around the world. Headlined: "*Deaths, chilling safety lapses, lawsuits, huge cost over-runs and delays: Why we can't trust the French with Britain's nuclear future*", the story detailed financial mismanagement, industrial chaos, worker deaths and an appalling inability to meet construction deadlines at Flamanville in Normandy. The problems at Flamanville have also been reflected in the Olkiluoto power plant in Finland — the first EPR project. Work started there in August 2005. It was scheduled to start producing power in 2009, but this has now been put back to 2015 at the earliest — ten years after construction began. (13) As a consequence of all these delays, the reactor design is unproven anywhere in the world. (14)

The Telegraph said it's hard not to have misgivings over the costs and strategic logic of this deal. David Cameron has been banging on about "*our determination to embrace new technologies and back new... energy sources*", conveniently forgetting there is zip new about nuclear. It only seems new because we are building our first station in a generation – since Sizewell B in 1995. But the Government has no idea whether technical innovation or the plunging costs, say, of solar power, will make the technology redundant. (15) For anyone that has taken a close interest in what's going on in Germany the deal looks about as sensible as building a chain of red phone boxes across the country. (16)

In Germany the renewables community seems quite pleased with the Hinkley announcement because nuclear prices are now so transparent and so high! Clearly, the rates that will be offered for new nuclear by 2023 in the UK are far above what solar and wind currently cost in Germany and these rates are going down. (17) Hinkley C will be paid more than twice as much as German solar PV arrays. (18)

Mark Turner, a director at the UK's leading solar power generator Lightsource Renewable Energy, has written to David Cameron to point out that Britain's solar industry has the capability to deliver the same energy production at Hinkley Point C within 24 months and at comparable cost. Hinkley won't be able to contribute to reducing dependence on fossil fuels for ten years. Solar power, on the other hand, could provide energy security quickly, reduce electricity bills and protect the environment at the same time. In his letter, Turner describes how solar power will not be the entire solution "*but if we supported its deployment then within a couple of years we could have 10% of the UK's energy mix completely free from the vagaries of the global fossil fuel markets*". (19)



Energy minister Greg Barker says the only way to maximise solar's contribution to the 2020 renewables target is to "squeeze out subsidy" and to "compete like-for-like with fossil fuels". But that is not a challenge he extends to nuclear power. Ed Davey says the nuclear price "is competitive with projected costs for other plants commissioning in the 2020s". But this is frankly absurd according to the Solar Trade Association (STA) which has asked for a strike price of £91/MWh in 2018 and expects this to fall to £86 by 2019, falling year on year thereafter, paid over 15 not 35 years and with no nuclear-style small print permitting a possible increase in strike price once those terms are set. (20)

The story is similar with wind. Experts argue the price support for electricity from onshore wind farms is likely to fall from £95/MWh in 2019 to below £92.50/MWh - and maybe even below £89.50/MWh - by the mid-2020s with greater deployment and falling costs. The European Wind Energy Association says onshore wind costs could fall to £48/MWh by the 2020s making it the UK's cheapest power source. (21) A government-backed Offshore Wind Cost Reduction Task Force last year proposed a 29-point plan to get the cost of the technology down to £100/MWh by the end of the decade. This target seems highly ambitious given the £135/MWh strike price proposed for 2018/19, but Jennifer Webber of trade body RenewableUK said offshore wind would probably be undercutting nuclear by the mid-2030s. "In 2038 you're still paying £92.50 for nuclear, when wind isn't going to be anything like that," she said. (22)

As if all this were not enough the Coalition's promise to eradicate fuel poverty by 2016 "as far as reasonably practical", now looks impossible to achieve, and yet David Cameron has announced a review of so-called "green taxes" with the Energy Company Obligation - a government measure requiring energy companies to subsidise home insulation for low-income households being singled out for particular attack in recent weeks. (23)

Thankfully, the nuclear announcement is a long way from being a done deal. EDF will not give the go ahead for contractors to start building until the deal has received state aid clearance from Brussels, which could several months or even a year. Main construction work is not expected to start until mid-2015, according to *Building* magazine. The main £2bn programme of civils work to be undertaken by Laing O'Rourke and Bouygues, is currently scheduled to begin in January 2014, but companies contracted to build a crucial £50m temporary jetty for the project - one of the first projects to be done - have now been told to not to expect to start work until the end of the third quarter of 2014. The main civils work is not expected to start until 9 months after the construction of the temporary jetty i.e. mid-2015. (24) EDF says it will make its final investment decision by July 2014, but state aid approval from the European Commission could take up to 12 months to complete, which would push the investment decision back even further. (25)

The price of solar power has halved in the last few years, and continues to fall. By the time Hinkley C is operational, probably around 2023-2025, the price of solar will have halved again, maybe twice over, and will no longer need any subsidy at all. With the growth in renewables the entire concept of baseload power is becoming obsolete. Supply from renewables is variable, as is demand by electricity consumers. What is needed to fill the gap between the two is not an inflexible 3.2GW, but power stations whose output can be modulated. For some time to come the best fuel will be gas, which is relatively clean and



low carbon, while modern gas power stations are highly efficient and can be ramped up quickly to meet demand. (26) The chances are that by the time Hinkley opens, if it ever does, it will already be obsolete. Indeed by then the very concept of a traditional utility company may be well on its way to becoming obsolete. (27) Former Labour MP Alan Simpson summed up the situation when he told a House of Commons Committee that the Hinkley decision is “*a huge public contribution to towards yesterday’s energy thinking*” (28)

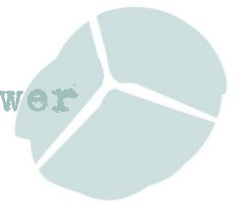
The announcement of the proposed Hinkley strike price was greeted with a chorus of criticisms – some quite strong even by British political standards. A selection can be found here: <http://www.ianfairlie.org/news/governments-proposed-deal-at-hinkley-c-receives-strong-criticisms/>

Perhaps the most damning was from Lord Lawson of Blaby who blamed Ed Davey, for letting EDF Energy “take the British Government for a ride”. He said that Mr Davey had awarded EDF a “ludicrously high” subsidy. (29)

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2. Analysts Flabbergasted by Hinkley Deal

Based on the disclosure so far the Hinkley contract looks likely to be an outstanding deal for EDF and its partners, according to Liberum Capital. EDF could earn a Return on Equity (ROE) well in excess of 20% and possibly as high as 35%. Liberum forecasts that cash dividends of between £65bn to £80bn should be payable during the life of the Contract for Difference (Cfd) or guaranteed price.

When the station commissions in 2023 the strike price will likely be above £121/MWh. For this to be competitive with fossil fuels, the gas price will need to have increased by at least 130% from today's levels. Once again, the UK government is taking a massive bet that fossil fuel prices will be extremely high in the future. If that bet proves to be wrong then this contract will look economically insane.

"We are frankly staggered that the UK government thinks it is appropriate to take such a bet and under-write the economics of any power station that costs £5m per MW and takes 9 years to build ... we are flabbergasted that the UK government has committed future generations of consumers to the costs that will flow from this deal." (1)

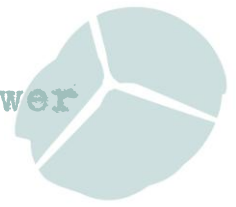
Hinkley will saddle householders with overpriced energy for decades to come. (2)

Construction costs have gone up and now stand at £8bn per reactor or £5m per MW. Liberum, says this make Hinkley the most expensive power station in the world. And EDF has been given an astonishing 9 years to complete the construction, which makes Hinkley the plant with the world's longest construction period. In other words EDF has built so much fat into the project that a cost or time overrun looks highly unlikely.

But Professor Steve Thomas of Greenwich University argues nuclear power stations are almost never built on time and to budget so the government could end up paying the price. He points to plants at Olkiluoto in Finland and Flamanville in France, both of which have overrun by many years and have seen costs rocket. The Finnish government and EDF's partner at Hinkley, Areva, are at war over who picks up the bill despite Areva originally agreeing a fixed price.

"The UK government asked me what they could learn from what went wrong at Olkiluoto and I said 'nothing because everything went wrong'." (3)

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3. Hinkley Notes

- Analysis for *The Sunday Telegraph* by CF Partners, the advisory and investment firm, suggests that Hinkley Point could directly add £8 a year to average household bills when it starts generating. Roland Vetter, head of research at the firm, said a 35-year contract at £92.50/MWh implied guaranteed revenues for EDF of £83bn in real terms. Based on his estimate of increases to market power prices by 2020 that would imply total subsidies of £800m a year or £8 for an average household in today's money, if subsidies were spread evenly among all consumers. (1)
- *"In the long term,"* the chancellor said, new nuclear should lead to *"lower and more stable energy bills."* The key phrase there is *"long term"*. The claim rests on the assumption that the costs of other sources of energy will continue to rise and make £93 appear a bargain sometime in the future. That assumption may or may not prove correct – but coming from a government that supposedly thinks fracking will revolutionise the energy market, it's a strange argument to hear. (2)
- Damian Carrington writing on *The Guardian* website said the EDF deal is *"a delusional dream"*. The cost of nuclear energy has tripled in just five years while the cost of renewable energy is falling fast, making the UK government's deal a truly terrible one. *"Ministers have not backed the favourite, or even a speedy but erratic outsider: they have backed a horse running in reverse."* (3)
- Ed Davey, the Energy Secretary, claimed British companies would benefit from up to 57 per cent of the value of Hinkley Point C, but EDF Energy says the share given to British companies would not be guaranteed in the final investment contract. (4) In fact EDF says UK companies are set to miss out on the majority of specialist contracts because of a dearth of hi-tech engineering skills in the country. Most of the available contracts could be beyond UK suppliers which are struggling to meet the complex safety and quality standards of the nuclear industry. Contracts for what EDF described as "muck shifting" have already gone to UK companies which, but contracts for hi-tech engineering, civil engineering, marine engineering and various support services are at the preferred bidder stage or yet to be tendered. (5) With Hinkley Point C set to utilise Areva's EPR, it is clear that much of this capacity will come from France. However, with China General Nuclear Power Group owning nearly half of the project, it is also likely we will also see Chinese engineers involved in the construction of the plant. (6)
- Greenpeace has dropped its legal challenge against Hinkley. In May, the campaign group lodged an application for a judicial review of the government's decision to grant the plant planning permission, but this was dropped last week. Greenpeace energy campaigner Emma Gibson said: *"Our legal case was based on the fact the government should not have given planning consent for Hinkley C without first having a long-term plan for dealing with the radioactive waste. Material we've seen in the disclosure process suggests that, although it may strain credulity, the*



government's assertion that it will be able to find somewhere to put a waste dump in due course would be accepted by the court." (7)

- An Taisce, Ireland's equivalent of the National Trust, is still going ahead with its judicial review challenging the legality of the decision by Ed Davey to grant permission to build the plant. The group claims that the UK Government has failed to consult the Irish people and it questions whether the development complies with both the EU's Environmental Impact Assessment directive and the UK's own regulations on trans-boundary impacts and consultation. A spokesman for An Taisce denied that the move was a PR stunt that had little chance of success, pointing out that, as a charity, it had a duty to think hard before taking legal action. (8) An Taisce says the Irish government should have been consulted on transboundary effects as part of environmental impact assessment (EIA). The United Nations is taking an interest in the case, because the EIA requirements derive from the international Espoo Convention (Finland's second city, in case you were wondering). The Espoo Convention Implementation Committee has written to the Irish, Austrian and German governments to ask if they were consulted about the project (the answer is probably no) and whether they think the project is likely to have significant environmental effects in any of those countries (again the answer may well be no). They have until 25 November to respond. (9)
- Meanwhile Ed Davey says EDF may not make a final investment decision on building Sizewell C in Suffolk until 2020. Davey said that while going through the design process for the Somerset plant would shorten the planning time for Sizewell, the final decision was not expected until the end of the decade. (10)

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4. The Chinese are Coming

George Osborne announced on a trip to China that Chinese companies will be allowed to take a stake in new reactors being built in the UK - perhaps even a majority stake at some point in the future. He made the announcement at Taishan nuclear power station in Southern China - a collaboration between EDF and the China General Nuclear Power Company (CGNPC), (1) (which incidentally is expected to start commercial operation a year later than originally planned in 2016. (2))

CGNPC wants “...the freedom not to be capped later on if EDF wants to sell equity and the Chinese want to stay in”. But others were less sanguine about China possibly coming to dominate Britain’s nuclear industry. “It’s troubling how far the Government is bending over backwards to allow this,” said Paul Dorfman, research associate at the energy institute of University College London. (3) Dorfman cited the NTI Nuclear Materials Security Index which ranks China as 27th out of 32 countries with weapons-usable nuclear materials for “security and control measures”. (4)

“If you are talking about key energy infrastructure, there’s no way that any other EU country or the US or Russia or even China itself would allow this to happen with someone who didn’t share their political views,” says Dorfman. (5) For a chancellor so keen on the defence of UK national sovereignty against democratic Europeans, George Osborne’s unbridled enthusiasm for Chinese investment in the UK’s critical infrastructure is striking. (6)

China’s nuclear industry hopes that Hinkley will become a launch pad for its international expansion. China has much at stake in its planned co-operation with the UK. “The Chinese have big ambitions to market their technology internationally, and being part of the UK nuclear project will help them achieve that,” says Mamdouh El-Shanawany, head of new nuclear opportunities at Lloyd’s Register. (7) If Chinese firms manage to meet Britain’s strict regulatory requirements, it will give them credibility as they seek to sell their technology elsewhere. The memorandum of understanding also includes training for Chinese technicians in Britain in radioactive waste management. (8)

Taishan uses EPR reactors built by a partnership between EDF and CGNPC. It’s one of almost 30 new nuclear power plants China is building or planning to build. China has not had any major accidents at its nuclear power stations, and says its safety record is good. But there are concerns that, in the dash to build so many new reactors, and use indigenous Chinese technology in some, safety could be compromised. Just down the coast from Taishan lies Hong Kong, where environmental groups enjoy far more freedom than they would have in China. They say there are reasons the UK should be cautious about partnering with China’s nuclear operators. “My first concern would be the lack of transparency,” says Prentice Koo, at Greenpeace. “Their track record is really bad. For every incident in a nuclear power plant in China, they only provide a very brief report, and all it says is how they solved the problem”. His second concern is whether Chinese companies would actually pay up if they were found liable for any incident that happened to a reactor they had built overseas. “The nuclear industry in China enjoys such a privileged position that they have to pay only very limited sums in compensation if there is any major incident,”



explains Mr Koo. *“Overseas they’ll be required to pay a lot more... it’ll test the ability of China’s nuclear industry to pay up.”* (9)

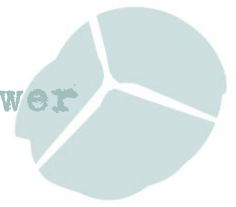
Nuclear Engineer, John Large says he feels uncomfortable with the lack of transparency around the Chinese atomic industry: *“We can see that even with the French operatorship of UK nuclear power stations that there are differences in the regulatory regimes in France and the UK. But these problems would be much more profound with the Chinese, who like the Russians, are rooted in a government system without independent [safety] regulators.”* The anti-corruption organisation Transparency International has highlighted Chinese firms as some of the most secretive within the world’s fastest-growing markets. Large said it would be quite easy to supervise a US company working in Britain because they were used to operating under the American safety regime, which is noted for its openness. But he said he was very wary of the “totally non-transparent” Chinese regulatory system, which left outsiders with almost no idea how it really worked. Large feared that the Treasury’s enthusiasm for winning and keeping foreign investment might mean pressure being brought to bear on the Office for Nuclear Regulation to gloss over problems encountered with a Chinese operator. (10)

One writer in the trade magazine, *The Engineer*, called the deal *“inexplicable”*. *“With continuing concerns about Chinese cyber-attacks on foreign governments’ computer systems, should we really be inviting companies which many believe to be effectively arms of the Chinese government into our critical infrastructure at all?”* (11)

George Osborne’s announcement also included the prospect of the Chinese taking a majority stake in a British nuclear plant in future, which would involve the use of Chinese technology. This couldn’t happen before 2020 at the earliest because a Chinese design would have to go through the Generic Design Assessment process. *“There are worries about whether or not the Chinese regulatory system is rigorous and incorruptible,”* says Professor Gordon Mackerron, an energy economist based at Sussex University, *“although the official story will be that all nuclear reactors ever approved in the UK are approved to rigorous British design.”* (12)

The deal with China *“reeks of despair”* according to Stop Hinkley. Having failed to attract any private investors, our *“most sensitive and hazardous industry”* is now being handed over to non accountable third-party state powers, because otherwise the Tories energy strategy would collapse. *“The coalition have no plan B for meeting UK energy demand, so they now want EDF’s Hinkley C development to be completed at any cost, even if that means relying on the century-long good will of a totalitarian state.”* said Theo Simon of the Stop Hinkley group. (13)

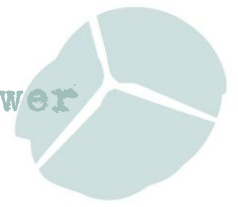
Former BBC journalist Isobel Hilton who now runs China Dialogue says: *“Surely we ... should be asking more questions of a chancellor who appears to think that Chinese money buys him out of the intractable difficulties and uncertain costs of nuclear power? Will British consumers end up paying high energy prices to guarantee a Chinese investor a good return? What future leverage will Chinese investment in British infrastructure give to an emerging power that frequently says it does not accept established global rules? What degree of transparency and accountability can we, as supplicants, enforce on our new partner? What*



guarantee have we that in depending on Chinese finance, we haven't surrendered more than we bargained for?" (14)

As we reported last month CGNPG is thought to be looking at the possibility of building one of its own reactors at Bradwell in Essex. (15) Land next to Bradwell power station, owned by EDF Energy, remains one of a number of sites the Government has earmarked as suitable for a new build power station. (16)

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5. Small is Beautiful?

Our energy system is currently based on large-scale technologies, centralised networks for transmission and distribution, and supporting institutional frameworks. These have delivered economies of scale and reliability, but are prone to inertia and are increasingly struggling to deliver on the UK's three goals for energy policy. A rapid low carbon transition is required, that is also affordable and secure.

Most projections and the independent advice to government from the Climate Change Committee see a growing role for electricity because it is easier to decarbonise and can be provided through a range of technologies. But we know from the latest evidence from the IPCC that we have to decarbonise quickly; at the same time we have to maintain the ability of the system to deal with shocks and stresses; and we have to maintain affordability and deal with fuel poverty.

Richard Hoggett of the Energy Policy Group at Exeter University says new nuclear could provide large amounts of low carbon power and would clearly fit into the current design and operation of the system. (1) But it's a large inflexible technology in terms of its operational profile. It is also not adaptable, showing very long development cycles, with around 30 years between each generation of reactor design. Once built it will be on the system for 60 years or more and it's impossible to know how the system will change over this time. At best it's likely to have a limited role in a changing system, at worst it could constrain other technology options, or system operational choices, as these will have to fit in around nuclear. And this extends into the wider rules, regulations and governance of the energy system, with nuclear reinforcing the status quo.

In comparison, PV can be used at a range of scales and applications, is highly modular, and can be deployed quickly. Yes, it would take a lot of PV to match the output of a nuclear plant, and it is a variable source in terms of diurnal cycles and changing weather patterns, but its scale and adaptability are likely to be much more supportive of a system in transition. With developments in storage, this will only increase.

And costs can't be ignored. Recent estimates suggest that the price of nuclear over the last ten years has increased from \$1,000/kW to \$7,000/kW. Its role in providing affordable energy is therefore wide open to question. In terms of costs, PV has shown dramatic market growth and price reductions in recent years, with fierce competition and global overproduction resulting in significant and rapid price reductions. PV is now becoming increasingly competitive with electricity retail prices in many countries with new research suggesting it will soon need little or no subsidy.

Neither PV, nor nuclear, can meet all of our energy needs, but considering technology options in terms of their flexibility, adaptability and resilience provides important insights. In a rapidly changing system it will become increasingly important to take decisions that take account of these characteristics. PV wins hands down over nuclear on these criteria as would many other renewable sources. Reframing the debate around flexibility, adaptability and resilience could



put the UK on a much clearer and realistic path to decarbonisation, security and affordability; something Germany has clearly understood and acted upon.

One of Europe's largest utilities, RWE, is reported to be on the cusp of transforming its business from being a centralised energy provider into a decentralized energy provider. The board of RWE has apparently agreed on a momentous change to its strategy. "*The massive erosion of wholesale prices caused by the growth of German photovoltaics constitutes a serious problem for RWE which may even threaten the company's survival.*" (2)

Across Europe renewables are helping push wholesale electricity prices down. For established utilities this is a disaster. Their gas plants are being shouldered aside by renewable-energy sources. They are losing money on electricity generation. They worry that the growth of solar and wind power is destabilising the grid, and may lead to blackouts or brownouts. They argue the growth of renewable energy is undermining established utilities and replacing them with something less reliable and much more expensive.

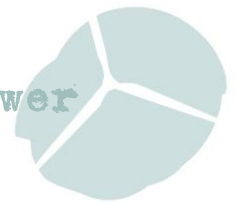
European utilities would have been in trouble anyway, whatever happened to renewables, says *The Economist*. During the 2000s, European utilities overinvested in generating capacity from fossil fuels, boosting it by 16% in Europe as a whole and by more in some countries (up 91% in Spain, for example). The market for electricity did not grow by nearly that amount, even in good times; then the financial crisis hit demand. According to the International Energy Agency, total energy demand in Europe will decline by 2% between 2010 and 2015.

As wholesale prices fall, so does the profitability of power plants. Bloomberg New Energy Finance (BNEF) reckons that 30-40% of RWE's conventional power stations are losing money. But that is only the half of it. Renewables have not just put pressure on margins. They have transformed the established business model for utilities. Michael Liebreich, BNEF's chief executive, compares them to telephone companies in the 1990s, or newspapers facing social media now.

In Germany, the cost of generating a megawatt hour of electricity with solar panels has fallen to €150, above wholesale prices but below the fixed price that renewables receive and below residential prices. This means solar generation may rise even if Germany's new government cuts subsidies to renewables. Their challenge to the old utilities will increase. By and large utilities have been slow to invest, especially in solar. Utilities own only 7% of renewables capacity in Germany, for example.

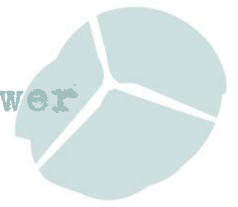
The Economist concludes that Europe in general and Germany in particular see themselves as pioneers of low-carbon energy. If they are genuinely to be so, they will need to design a much better electricity system that rewards low-carbon energy without reducing reliability and imposing undue and unnecessary costs. (3)

Catherine Mitchell, Professor of Energy Policy at Exeter University, asks why this new economics of energy is not visible in Britain and not feeding through to customer bills? The answer has three parts to it. Firstly, the Government – which asked the right question of Electricity Market Reform but got the wrong answer – has closed down, rather than opened up, the energy system to competition and innovation, in part because of ideology. They have ideologically (and illogically) supported nuclear power to the detriment of new energy practices despite all evidence pointing to the costs, difficulties and minimal benefits. They have willfully ignored evidence of successful policies (such as 0% loans for energy efficiency) and put in place policies which they were told would not work because of their



complexity (such as the Green Deal) and which would add to the cost of policies , thereby increasing the numbers of the fuel poor. Secondly Ofgem has been all too willing to undertake ‘light touch regulation’ and become too close to the companies it regulates. Thirdly, the large energy companies are all too aware of changes coming inexorably their way, and are trying to work out how to survive in the reality that is the new utility business in Europe, and until then are doing all they can to keep their share price up by maintaining high dividends so they don’t get taken over – hence keeping prices as high as they can and doing whatever they can to undermine innovation, including new entrants. (4)

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6. Nuclear Subsidies, Europe and the English Dictionary

As reported above Hinkley could be delayed by the European Commission (EC) for up to 12 months. The EC will have to scrutinise the terms of the agreement between the Government and EDF under state aid rules. According to *The Independent* the Austrians and Germans could prove to be particular obstacles to a smooth approval. (1) Poland, the Czech Republic, Slovakia and Hungary want the European Union to support nuclear energy projects. (2) So the Hinkley agreement is not legally binding. A final investment contract is expected to be signed in the summer of 2014, but this is based on an optimistic estimate of how long it will take the EC to decide. (3)

Catherine Mitchell says the European Commission may declare certain categories of State Aid compatible with the internal market and thus approve them. To that end, the EC publishes Guidelines which set out which measures are less problematic. The Guidelines are guidelines and not legally binding. The current Guidelines will expire on 31 December 2013 and work has started on a successor. There needs to be 8 weeks of public consultation before the new guidelines come into force, and these are expected in the first quarter of 2014. On 8 October 2013, the European Commissioners did not agree to change the Guidelines for State Aid to include nuclear power. This does not mean that State Aid for nuclear power is illegal. It means that nuclear power projects will continue to go through the case by case authorization process which takes longer and is not as legally certain. The EU's Competition Commissioner, Almunia, said the EU has no plans to encourage State Aid for nuclear power or to make it easier for member states to grant such aid. The next step is for Electricity Market Reform (EMR) and Contracts for Difference (CfDs) to undergo a detailed examination by the EC in order to get through State Aid. The key question is whether EMR is strong enough to withstand yet another hiatus and examination. (4)

A leaked document from the European Commission has revealed the true scale of EU energy subsidies. Each year member states spend €40 billion on supporting fossil fuels (including indirect subsidies), €35 billion on nuclear, and just €30 billion on renewable energy. When it comes to state aid, renewables are the poor relation! The figures emerge from an official EU document published by the Energy Commissioner, Guenther Oettinger. But not from the official version which has key information removed. The original version written by his civil servants was suppressed, and only discovered by the German news daily *Süddeutsche Zeitung*. Key passages showing the scale of subsidy for fossil fuels and nuclear power were thought to have been deleted by Commissioner Oettinger himself. (5)

Energy minister Michael Fallon and Green Party MP Caroline Lucas had a long debate about the definition of the word "subsidy" while Fallon gave evidence to the Environmental Audit Committee in the House of Commons. (6) Lucas said the government had used "*a sleight of hand*" by redefining the original coalition agreement that there would be no public subsidy for new reactors. She argued that the government had changed the pledge to mean "*no subsidy unless it's being made in a similar way to other energy sources*". Fallon dismissed the charge and



said that the government told parliament in October 2010 that there would be no levy or direct payment or market support for "*new nuclear that wasn't available in a similar to any other low-carbon new type of technology*". Lucas responded: "*I'm an English graduate and one thing that really annoys me is when people redefine words. A subsidy doesn't cease to be a subsidy just because it's offered to more than one source, does it?*"

Fallon said: "If you're trying to get somebody else to put up £16bn worth of money to build a nuclear station and to accept all the construction risk in doing it, you obviously have to offer them some degree of reserved access to the grid when they start supplying electricity to it. So, there's a support mechanism for nuclear just as there is to offshore wind or biomass or anything else. These are market-based support mechanisms designed to facilitate the earlier introduction of high-cost, low-carbon technologies that the market wouldn't otherwise have been able to finance as quickly as we need them," Fallon stressed.

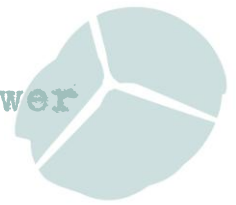
Lucas nearly cornered the Conservative MP when she argued that the fact that the government has to submit an application for state aid clearance to the European Commission for a new nuclear power plant "*surely means it's a subsidy*". Fallon attempted to slap the accusation away by stating that "*lots of support mechanisms have to go through the European Union*".

Conservative MP, Zac Goldsmith asked Fallon to restate his definition of subsidy, but the minister was unwavering and maintained that the nuclear agreement does not involve subsidies. (7)

Earlier Alan Simpson, a former Labour MP. Simpson compared the government's investment in nuclear energy to France's construction of the Maginot Line before the Second World War as a policy which required huge investment but ultimately failed. He called it "a huge public contribution towards yesterday's energy thinking." (8)

Tom Burke asks why if there is no public subsidy for Hinkley C as we were promised in the Coalition Agreement, does the Government have to make an application to Brussels for state aid clearance? It is very unlikely that any major components for Hinkley will be ordered until after state aid clearance has been granted. EDF have already announced that they do not expect the civil engineering work to begin at Hinkley before the middle of 2015. This is an optimistic assumption about how long it might take to get state aids clearance. (9) Burke argues the government's much-trumpeted nuclear announcement is a long way from being a done deal. The likelihood that any further nuclear power stations will be built after Hinkley C is vanishingly small. The investment community is already writing the obituary of utility business models based on large centralised generators of any kind. The cost of capital is much more likely to go up than the wholesale price of electricity. (10)

But the subsidy offered to EDF etc isn't the same as subsidies offered to renewables – it is far superior. Dave Toke, reader in Energy Politics at Aberdeen University compares the nuclear subsidy with the subsidy offered to community wind power schemes. Hinkley C is getting £92.5 per MWh for 35 years with 65 per cent of its capital costs 'underwritten' by loans which will be guaranteed by the Treasury. From 2018 onshore wind is being offered £95 per MWh, but only for 15 years and without any loan guarantees. Remember that independent generators will, in reality be paid a lot less than £95 per MWh, perhaps little more than around £80 per MWh, since



the contracts for differences (CfD) feed-in tariffs are available only to major electricity companies. The Big utilities will cream off the difference between these two figures. (11)

Meanwhile the Energy Fair Group has written to the European Commissioner to ask him to open a formal investigation into this project and associated subsidies. The letter is available here: <http://www.energyfair.org.uk/home/open-letter>

The group argues there is no valid justification for subsidising nuclear power. They divert resources from other options that are altogether better and cheaper, they are bad for energy security, bad for the fight against climate change, bad financially for consumers and taxpayers in the UK, and bad for the development, throughout Europe, of the good alternatives which are ready to go, cheaper than nuclear power, and very much quicker to build.

To support this letter see <http://www.energyfair.org.uk/home/open-letter/writing-to-commissioner>

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7. Energy Costs and Green Levies

After the furore about energy price increases David Cameron has announced a review of green energy levies after saying they had helped push up household bills to “unacceptable” levels. The prime minister told MPs he wanted to “roll back” environmental regulations and charges which he blamed on the last Labour government. (1) At first it looked as though this might turn into a huge fight between the Coalition partners with the Lib Dems insisting that green levies must not be cut.

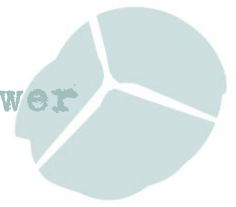
The Chancellor is expected cut back the green levies imposed on energy companies in his Autumn Statement on 4 December. But Energy Secretary, Ed Davey, says that he would fight “*like a tiger*” to preserve the incentives, which increase bills while promoting energy efficiency. The energy company obligation (ECO) – which requires the Big Six to insulate the homes of Britain’s poorest households – adds around £47 a year, or 4%, to an expected average bill of £1,267 in 2013, while the warm home discount, which entitles some vulnerable people to a £135 discount, and the rollout of smart meters adds another £11 and £3 respectively to the average bill. (2)

It now appears that agreement could be reached between Conservative and Liberal Democrat ministers on removing some of the green levies from consumers’ bills but funding them from general taxation instead. Ed Davey has indicated that he may be willing to remove the obligation from energy companies, but has ruled out delaying or scrapping the scheme, meaning the £1.3bn annual cost will have to be met from general taxation. (3)

Geoffrey Lean says, in *The Telegraph* that moving these charges from energy bills to general taxation would be much fairer, shifting the greatest weight of the burden to those best able to pay, since tax rates rise progressively with income. But there is one snag: it will make them much more vulnerable to the Chancellor’s whim. Any chancellor might eye them up as a place to make cuts – and this one, with his zeal for austerity and his apparent dislike of environmentalism, would seem particularly likely to do so. That would be tragic, especially for the poor for most of the money goes to fund social, rather than strictly green, measures aimed at helping them pay their energy bills. (4)

But any decision to take the Energy Companies Obligation (Eco) and the smaller Warm Home Discount off bills will mean finding £1.6bn a year to pay for the switch. The coalition will need to find ways to fund this through either tax rises or spending cuts. (5)

The wholesale cost of electricity and gas accounts is the biggest component of the prices customers pay for their energy - making up 46% of the average bill, according to energy regulator Ofgem. Network costs account for around another 23%; Supplier costs are 13% with about 5% profit; Environmental and Social Costs account for around 8% and VAT is 5%. (6) So most costs are beyond the Government’s control. Over the last ten years, wholesale electricity costs as a whole have risen by around 140%, and the cost of gas has risen 240%. And this is showing up on bills. Changes in wholesale costs accounted for at least 60% of the rise in household energy bills between 2010 and 2012 (7)



The 8% Environmental and Social Costs are made up of about 2% spent on renewable energy subsidies 4% on energy efficiency measures and 1% to reduce bills of people suffering from fuel poverty – the Warm Homes Discount. (8)

So while media commentary has largely focused on the cost of 'green' measures, it's clear that at least in the short term a good chunk of consumer bills are beyond political control.

There has also been some scrutiny of the Big Six energy companies' profits, such as by the House of Commons Energy and Climate Change Committee. Ed Milliband says recent price hikes were down to a "*broken market*" and corporate greed. While wholesale energy costs may be the main driver of increases all of the big six generate power as well as supplying it so when wholesale costs increase this might reduce their supply profit margins, but it will boost generation profits. Unmuddling the two parts of the businesses is notoriously difficult, leading Miliband to call for the supply and generation parts of the energy companies to be more obviously separated from each other. (9)

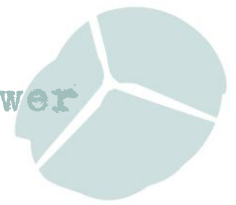
Donna Hume at Friends of the Earth says David Cameron's attempt to blame green policies for rising fuel bill hikes is simply a shoddy attempt to deflect attention from the real issues. Labour has pointed the finger at energy company profiteering – and rightly so. It's outrageous that their profits have increased by 74 per cent in just two years, while cash-strapped households struggle with their bills. But there's another reason our fuel bills are soaring – and one the PM seems happy to ignore – and that's the rocketing price of gas. A nationwide scheme to super-insulate homes and end fuel poverty is needed – and all parties must commit to the spending to do it. And it must start now. What's more this must target the poorest first and be coordinated by local councils. (10)

The speculation surrounding the future of the Energy Company Obligation (ECO) scheme is having a "devastating" impact on the insulation and energy efficiency industry as the "Big Six" energy companies have responded to the government's controversial "green levy" review by shelving promised energy efficiency projects. Andrew Warren, director of the Association for the Conservation of Energy (ACE) has written to Energy and Climate Change Secretary Ed Davey yesterday to warn that its members have seen the flow of ECO projects dry up since the Prime Minister announced last month that he wanted to "roll back" some "green levy" schemes. (11)

Former Labour MP, Alan Simpson writes:

"The current 'energy debate' is in danger of descending into little more than an unsavoury slanging match. Ed Miliband's price freeze proposal was a brilliant opening ploy. But in the vacuum that followed, it looked more like a policy space the Party didn't know how to fill. The moment called out for a radically different plan of what tomorrow's energy market must look like ... Some 70% of Britain's fuel poor live in properties with 'bottom of the barrel' energy efficiency ratings of E,F or G. A genuine 'fuel poverty' strategy would commit to lifting all these properties to Band D standards by 2020, and raising the rest of our housing stock to today's 'new build' standards by 2030."

Zoe Williams, writing in *The Guardian*, said "greed" is an unhelpful diagnosis, and the notion of a review of competition between the Big 6 companies is about as much help as a price freeze at an astronomically high baseline. Nationalising the industry might have some effect because the



government is answerable to a populace, but she argued in favour of more local ownership. When you own a stake in the energy you use, you use less of it. Solar Schools have been a striking example of this. Schools have always been able to get a solar scheme off the ground with help from one of the big six; but the real behavioural change happens when they raise the money, they build the panels and they get the savings. Likewise, people can invest in a renewable project but it doesn't necessarily change their own energy behaviour; negawatts (units of energy saved) are generated when people build their own wind turbine, and it powers their own town. "Tangibility" is the word that comes up constantly – you don't waste it when you can conceive of the energy you have invested in coming in to your house. (12)

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8. Nuclear vs Climate

Nuclear power is back in the climate headlines after climate scientist James Hansen was joined by three others in posting a public letter in which they jointly urge environmental organizations to stop opposing nuclear power. In the letter they say that more nuclear energy is urgently needed and essential in the fight against global warming -because, in their opinion, wind and solar “cannot scale up fast enough to deliver cheap and reliable power at the scale the global economy requires.” (1)

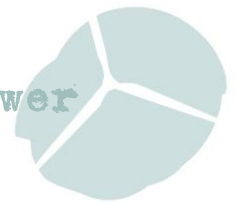
Mark Jacobson a professor at Stanford in the Department of Civil and Environmental Engineering finds that perspective to be “without foundation or factual support.” Research by Jacobson paints a completely opposite picture and says that wind, water, and solar can replace fossil fuels quickly, without nuclear. He said that nuclear power actually takes “10-19 years to plan, permit, and install, compared with 2-5 years for a solar or wind farm.” Regarding next generation nuclear power, Jacobson said that it “does not even exist, except in theory and in the lab, and there is no guarantee it will ever exist at the commercial scale.” (2)

Dr Daniel Kammen, co-director of the Berkeley Institute of the Environment at the University of California says: “Nuclear power is certainly low-carbon in the use phase, but the problems with the nuclear fuel cycle, as managed today, are of: cost and extreme accidents. Today, nuclear power plants can cost as much as \$10 billion for a 1500 MW plant and take a decade to construct ... The climate crisis demands significant low-carbon deployment today, and it is not clear if nuclear can meet that immediate challenge.” (3)

The US-based Natural Resources Defence Council (NRDC) said “the authors of this letter (and other nuclear energy proponents) are on the wrong track when they look to nuclear power as a silver bullet solution for global warming. To the contrary, given its massive capital costs, technical complexity, and international security concerns, nuclear power is clearly not a practical alternative. Instead, energy efficiency will always be the quickest, cheapest solution to our energy and climate challenges, and clean renewable energy is growing today by leaps and bounds. Inexplicably, Dr. Hansen and his colleagues ignore energy efficiency altogether”. (4)

NRDC says the treatment of renewables is inaccurately dismissive. Wind farms and solar arrays can be installed much faster and typically at lower cost than new nuclear plants, and the consequences of any single unit’s failure are trivial by comparison. Hansen et al.’s contention that these resources cannot “scale” rapidly enough to make a difference is belied by the recent record – windpower alone added nine times more generation than nuclear plants to the US grid from 2000 – 2012. The National Renewable Energy Laboratory has concluded that “renewable electricity generation from technologies that are commercially available today, in combination with a more flexible electric system, is more than adequate to supply 80% of total U.S. electricity generation in 2050 while meeting electricity demand on an hourly basis in every region of the country.”

The co-authors of the Hansen letter hold out the promise of “safer nuclear energy systems” that will somehow turn things around. But the global history of the nuclear industry is littered with



costly failures to create advanced reactor designs that could “*reduce proliferation risks and solve the waste disposal problem by burning current waste and using fuel more efficiently.*”

The Sierra Club said: “*If Fukushima, Chernobyl and Three Mile Island have taught us anything, it’s that nuclear plants are too expensive, too slow to build, and too risky. That’s why countries like Germany – one of the largest economies in the world – are going all in on renewable energy sources and decommissioning dangerous nuclear plants.*” Joseph Romm, the lead climate blogger with the liberal Center for American Progress, focuses on the cost of nuclear plants in his own rebuttal to the scientists' letter: “*I think their letter is mis-addressed and also misses the key point about nuclear power — because it is so expensive, especially when done safely, the industry has no chance of revival absent a serious price on carbon.*” He writes that it’s not the green movement that has prevented construction of new nuclear plants in the U.S. in recent decades. “*As a practical matter, environmental groups have had little impact on the collapse of nuclear power in America. The countries where nuclear has dead-ended are market-based economies where the nuclear industry has simply been unable to deliver a competitive product,*” he writes. (5)

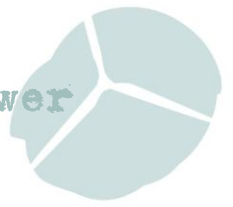
Meanwhile the pro-nuclear documentary, *Pandora’s Promise* by director Robert Stone will be released on 15th November. The film will also form part of a mini festival in London’s Brixton on Saturday, showing alongside five other documentaries exploring the pros and cons of nuclear generation and a panel discussion featuring Stone and several of his fellow filmmakers. (6)

For all the globetrotting from Fukushima to Chernobyl to Three Mile Island, the film completely ignores the issue which is actually at the centre of today's nuclear debate: cost. Damian Carrington writing on *The Guardian* website says there is a serious debate to be had about whether new nuclear power stations are a vital tool in tackling climate change or a damaging distraction from a truly clean energy future. The debate needs to be about which technology should be used, in which countries, at what cost and at what speed of deployment. This film, with its scant cast of writers and octogenarian engineers, says nothing about any of these issues. (7)

US group Beyond Nuclear says “*exchanging global warming for nuclear meltdown is not the answer. From a purely practical standpoint — and ignoring for a moment nuclear power's other showstoppers such as cost, unmanaged nuclear waste, atomic weapons proliferation and catastrophic accident — there simply isn't time to choose nuclear power. There are faster, affordable alternatives, including energy efficiency and renewable energy installations such as wind farms and solar arrays that can be completed in months to a few years.*” (8)

Beyond Nuclear has produced a series of briefings on the film which can be found here: <http://www.beyondnuclear.org/pandoras-false-promises/>

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1. World Nuclear News 4th Nov 2013 <http://www.world-nuclear-news.org/EE-Nuclear-essential-for-climate-stability-0411137.html>
 2. Fairfax Climate Watch 4th Nov 2013 <http://www.fairfaxclimatewatch.com/blog/2013/11/hot-topic-hansen-says-global-warming-demands-nuclear-energy.html>
 3. RTCC 4th Nov 2013
<http://www.rtcc.org/2013/11/04/nuclear-essential-in-climate-fight-say-leading-scientists/>



4. NRDC Blog 5th Nov 2013
http://switchboard.nrdc.org/blogs/dbryk/response_to_an_open_letter_on.html
5. Grist 7th Nov 2013
<http://grist.org/article/more-nukes-are-you-kidding-enviros-push-back-against-hansens-call/>
6. Engineer 11th Nov 2013
<http://www.theengineer.co.uk/blog/the-week-ahead-why-nuclear-energy-could-be-the-answer/1017451.article>
7. Guardian 8th Nov 2013 <http://www.theguardian.com/environment/damian-carrington-blog/2013/nov/08/pandoras-promise-pro-nuclear-movie-climate-change>
8. CNN 7th Nov 2013
<http://edition.cnn.com/2013/11/07/opinion/pandora-nuclear-gunter-kamps/index.html>



9. Sellafield: “an appalling waste of money”

Sellafield has been in the news again as the House of Commons Public Accounts Committee looks at progress on nuclear decommissioning at the facility. Evidence submitted by Cumbrians Opposed to a Radioactive Environment (CORE) was raised in the Committee. This showed the inability of the facilities to meet annual performance targets, and the chronic failure by the NDA and site licence company Sellafield Ltd to set realistic targets for the facilities. CORE’s evidence, relating specifically to the performance of the Thermal Oxide Reprocessing Plant (THORP) the Magnox Reprocessing Plant and the Waste Vitrification Plant, showed that since 2000/01, 72% of the targets set for the three facilities had been missed and that, since 2005/06 when the NDA took ownership of the facilities, that failure rate had spiralled to 92%. (1)

The spiralling costs have been described as “*an appalling waste of money*” with cash being “*scattered like confetti*” by the chair of the Committee Margaret Hodge MP. (2) Hodge said Sellafield’s failings proved how “*outrageous*” the decision had been to trust a private company to decontaminate the facility.

The £70bn project to decommission Sellafield is more than a decade behind schedule and is managed in the interests of shareholders not taxpayers interests, according to a report produced by the accountant KPMG and obtained through the Freedom of Information Act by Dr David Lowry. Nine of the 11 biggest projects to make Sellafield safe, including building a storage facility for radioactive sludge, are £2bn over budget. Seven will complete late, with a combined delay of eleven and a half years. The expansion of a huge waste processor, Evaporator D, is now expected in February 2016, a year and nine months later than planned. The report heaps pressure on the Nuclear Decommissioning Authority’s (NDA) decision last month to hand a five-year extension of the contract to clean up the site to Nuclear Management Partners (NMP). The consortium, led by US engineer URS, includes the British nuclear reactor specialists Amec. The five-year extension to the Sellafield contract worth £5bn was handed to NMP despite the fierce criticisms of its performance by KPMG. It accused NMP of overspending, failure to reach operational targets and weak leadership. Margaret Hodge said, having looked at the KPMG report, it is inexplicable that the NDA would continue with the NMP consortium after such a hugely critical assessment. (3)

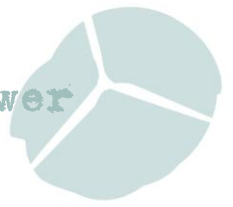
Since April 2012, KPMG found there had been 11.5 “security events” per month. Lowry said:

“Sellafield actually has quite a lot of security issues that have been played down and I’m concerned that a site of that size with that amount of radioactive material has any breaches. There has to be 100 per cent security and clearly there is not.” (4)

1. CORE 4th Nov 2013

<http://www.corecumbria.co.uk/newsapp/pressreleases/pressmain.asp?StrNewsID=327>

2. Whitehaven News 7th Nov 2013 <http://www.whitehavennews.co.uk/news/sellafield-costs-an-appalling-waste-1.1096703>



3. Guardian 8th Nov 2013 <http://www.theguardian.com/politics/2013/nov/08/sellafield-nuclear-margaret-hodge-kpmg-overspending>
4. Independent 10th Nov 2013 <http://www.independent.co.uk/news/uk/politics/report-damns-sellafield-firm-over-cleanup-8930953.html>



10. Plutonium Plans

Mark Higson, chief executive of the Government's Office for Nuclear Development, has been explaining to the House of Commons Public Accounts Committee what the Department of Energy plans to do with 111 tonnes of plutonium stockpiled at Sellafield. They are going to build a whole new plant to make use of it, he said, though the value of the fuel it produces will be less than the cost of running and building the plant. Margaret Hodge, who chairs the committee, was so taken aback by the revelation that the Government is planning a huge construction project which they know will lose money that she asked him to say it again, which he did. *"But you still want to build it?"* she asked. Yes, said Mr Higson, *"because it is a route for disposing of plutonium"*. (1)

Margaret Hodge pointed out that the UK spent £1.4bn on the previous MoX plant that couldn't be made to work. Higson said the Government wanted the MoX fuel produced to be used in the UK's new-build power stations. *"We expect MOX fuel to be utilised in new PWRs built on a new plant ... In power stations yet to be built. The EPR reactor at Hinkley, for example."* (2)

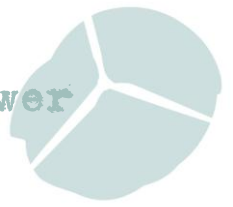
Hodge summarised the situation: *"We have spent £1.4 billion so far. We don't have the power stations that can utilise MOX, but we are still considering building one, although it will cost more than the fuel that we get from it in the power stations that are yet to be built."*

Subsequently EDF Energy denied the suggestion that Hinkley Point C would use MOX fuel. It said the use of plutonium-based Mixed Oxide fuel was not under consideration. In a statement, an EDF spokesman said: *"We have not used MOX in any of our stations and have no plans to do so in the future in our existing stations or new nuclear stations."* EDF says it won't use MOX and Horizon, the other major nuclear company hoping to build reactors in the UK, which is backed by the Japanese firm Hitachi, said it has no plans to use MOX either.

Steve Thomas, professor of energy policy at Greenwich University, commented: *"MOX is a nuclear fuel invented by governments to address the embarrassing problem of what to do with separated plutonium. It is expensive, difficult to handle and increases maintenance and storage costs, so utilities will always be very reluctant to use MOX unless forced to do so."* (3)

EDF's Hinkley application was for reactors which utilise 'conventional' uranium fuel. Further, in the part of its application concerning the disposal of spent fuel from any new reactors, EDF makes no mention of MOX spent fuel. In fact the use of MOX fuel, in an EPR is not allowed, at present, under the decisions made through the legally required 'Justification' process for new build. Any use of MOX fuel in an EPR would have to go through the Justification process, which would consider the costs of such proposals (along with possible health detriments and potential benefits). Mr Higson appears not to have mentioned this to the Committee. (4)

1. Independent 6th Nov 2013 <http://www.independent.co.uk/news/uk/politics/andy-mcsmiths-diary-it-may-not-be-old-trafford-but-the-reds-usually-score-in-cameron-time-8925324.html>



2. Uncorrected Transcript of the proceedings of the House of Commons Public Accounts Committee 4th November 2013 <http://www.parliament.uk/documents/commons-committees/public-accounts/Uncorrected%20transcript%20-%20sellafield%20follow%20up.pdf>
3. BBC 6th Nov 2013 <http://www.bbc.co.uk/news/science-environment-24834932>
4. Letter from Jean McSorley and Martin Forwood, dated 7th November 2013 to Margaret Hodge MP, chair of the Public Accounts Committee.



11. Radioactive Waste Developments

The Government has launched a new consultation on how to take forward the Managing Radioactive Waste Safely (MRWS) policy. A consultation document with questions asked is available on the Department of Energy and Climate Change website **PLEASE RESPOND TO THIS CONSULTATION BEFORE 5th DECEMBER 2013.**

More information available here: <http://www.no2nuclearpower.org.uk/news/campaign-update/radioactive-waste-consultation/>

A new group has been launched to stop an underground nuclear waste dump being built in west Cumbria. The Cumbria Trust says it will campaign against any store on “geological and safety” grounds and fight to preserve the integrity of the Lake District.

The trust’s initial board members include former Cumbria County Council leader Eddie Martin, lawyer John Wilson, from Keswick and Geoff Betsworth, from Silloth. It wants to build on the county council’s decision earlier this year to stop Cumbria being considered as the site of a huge store for high-level radioactive material. Both Allerdale and Copeland said they wanted to continue. (1)

Eddie Martin says people are incensed by the Government consultation paper. It is pointless to keep on and on trying to find a site in Cumbria. Geology is hopeless and much of the area is protected by statute. This is an underhand method of removing Cumbria County Council from the decision-making process. It would be immoral to build a repository without optimum safety. (2)

Plans to sideline the views of Cumbria County Council on whether a nuclear waste dump should be located in the county were attacked by councillors at a meeting of the Council in Kendal on 7th November. (3)

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1. Whitehaven News 30th Oct 2013 <http://www.whitehavennews.co.uk/new-group-aims-to-stop-underground-nuclear-waste-store-in-cumbria-1.1094825>
 2. Cumbria Trust 30th Oct 2013 <http://www.youtube.com/watch?v=s9b5eHJ7Hcc&feature=youtu.be>
 3. NW Evening Mail 8th Nov 2013 <http://www.nwemail.co.uk/news/loss-of-veto-over-cumbria-nuclear-waste-dump-site-extremely-flawed-1.1097156>