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- 1. Comment: The implications of a united front approach by nuclear and renewables for the low carbon agenda.**

Renewable UK, the Nuclear Industry Association and the Carbon Capture and Storage Association have written an unprecedented joint letter to Ed Davey, David Cameron and George Osborne. They are calling for a target to decarbonise electricity by 2030 to be included in the Energy Bill. (1)

The Trade Associations are right to be worried about the Treasury’s push for a new “dash for gas”. (2) The official projections of the amount of power generated from gas by 2030 has quadrupled in the last year, and Tory energy minister John Hayes has declared "enough is enough" over onshore windfarms. (3) Less than a tenth of the 31GW of gas-fired electricity generating capacity in 2030 is expected to have carbon capture and storage technology fitted to trap and bury carbon dioxide emissions, leaving the UK unable to meet its carbon emission targets.

Pro-nuclear ‘environmentalist’ Mark Lynas said one unintended benefit of the letter might be to wrong-foot greens who oppose nuclear, so it was disappointing to see Greenpeace welcoming the move despite its clear support for new reactors. (4)

Of course Renewable UK membership includes all the Big Six utilities, as well as other companies with a large stake in the nuclear business such as Areva, Vatenfall, and Balfour Beatty, so it was never going to come out against new reactors, but a more sophisticated response from environmentalists

might have been expected because there is no way that “*a diverse energy mix [which includes new reactors] is likely to be the most cost-effective pathway to largely decarbonising the power sector.*”

Apart from its many other problems, nuclear power is a hindrance, not a help in the fight against climate change. Nuclear power diverts attention, effort, and large amounts of money away from renewables and the conservation of energy, where those resources would be more effectively spent. (5) It was noticeable that the letter from the three trade associations failed to make any mention of energy efficiency, or support the calls to include demand management measures in the forthcoming Energy Bill. (6) Nor did it mention the 65 old people dying **every day** during winter because they can't afford to keep warm. (7) Efficiency measures can be up to seven times more cost effective than nuclear power, so every pound spent on nuclear instead damages efforts to tackle climate change because there is only a finite amount of money available. (8)

We don't need a dash for gas or a new nuclear programme. What we do need is a much larger energy efficiency programme with a focus on avoiding driving millions of low and middle income households into fuel poverty, because, as almost everyone agrees, whatever energy mix we choose energy bills are going to rise. The first thing we should do is stop planning for a doubling or tripling of electricity demand by 2050, and instead plan for a reduction of 25%, as in Germany. (9) The electricity generating capacity required by 2025 would then fall by around 15%, removing the need for new reactors.

We should also be aiming to generate around 60% of our electricity requirements with renewable energy by 2030 and any new gas-fired power stations should be part of a strategy to roll out district heating to large parts of the UK. (10) We don't have to choose between reliance on imported gas and environmentally damaging shale gas or new nuclear reactors which produce a toxic waste which we still don't know what to do with.

If all we can expect from the big energy companies is for them to divide the spoils of high energy bills between nuclear power, big offshore wind farms and new gas stations perhaps with carbon capture and storage, whilst we have to pay high bank interest charges for any Green Deal efficiency improvements made to our homes, then maybe more of us should be thinking about joining the growing numbers of local communities launching their own renewable energy co-operatives in an effort to slash greenhouse gas emissions and energy bills. (11)

In Germany much of the push towards a clean non-nuclear energy transition has come from a bottom-up approach at the local level. A rural and small-town revolution is currently underway where many different groups are forming energy co-operatives striving to become 100% self-sustainable renewable energy communities. In the past five years alone, more than 500 new renewable energy cooperatives have sprung up. (12) And the number of public utilities continues to rise. Big cities such as Munich, Cologne and Hamburg already have public utilities. Berlin and Stuttgart, as well as many smaller towns and cities, are debating the idea. One example is the small south German town of Schönau which took over the local power grid in 1997. Today, the co-operative sells its renewable energy mix all over the country. Last year's profits were €1.3m. (13)

Four power stations' worth of locally-owned renewable schemes could be installed by 2020 if the Government supports community energy, according to a coalition of organisations including the Co-operative, the National Trust, the Church of England and the Women's Institute. They want national targets for community energy, promotion of local ownership to increase public acceptance of renewables, Government-backed advice and support, higher subsidies for community schemes, tax breaks for investors and access to finance through the new green investment bank. The organisations, who represent 12 million members, are launching a "*manifesto for a community energy revolution*" setting out the measures they say are needed. The Co-operative estimates that the UK potential for

community-owned renewable energy installed by 2020 is 3.5 gigawatts, the equivalent of four conventional power stations. (14)

Rather than the future of the energy debate being about the Mark Lynas vision of how big nuclear and renewables companies can co-operate together – let's make it about how we can implement a local energy revolution; where everyone can afford to live in a warm house; where local authorities and communities can generate an income from co-operatively owned energy schemes and we don't have to worry about what we're going to do with the waste.

For readers in Scotland, the Edinburgh Community Energy Co-operative is holding a conference on 7<sup>th</sup> December in the City Chambers with speakers from Bath and Bristol Energy Co-ops.

<http://edinburghcommunityenergy.wordpress.com/2012/11/02/community-and-co-operative-energy-in-edinburgh-the-next-steps/>

- (1) Copy of the joint letter available at <http://www.guardian.co.uk/environment/interactive/2012/nov/05/letter-renewableuk-ccs-nuclear-carbon>
- (2) Independent 5th November 2012 <http://www.independent.co.uk/news/uk/politics/nuclear-wind-and-wave-power-chiefs-in-joint-appeal-on-green-energy-8281122.html>
- (3) Observer 3rd November 2012 <http://www.guardian.co.uk/environment/2012/nov/03/uk-dash-gas>
- (4) Independent 5th November 2012 <http://www.independent.co.uk/voices/comment/the-sun-is-setting-on-the-old-energy-debate-what-will-the-new-dawn-look-like-8281123.html>
- (5) See <http://www.energyfair.org.uk/oppcost>
- (6) Energy Desk 9th Oct 2012 <http://www.greenpeace.org.uk/newsdesk/energy/analysis/it%E2%80%99s-time-move-business-usual%E2%80%A6>
- (7) Independent 28th February 2012 <http://www.independent.co.uk/news/uk/home-news/fuel-poverty-deaths-three-times-higher-than-government-estimates-7462426.html?origin=internalSearch>
- (8) Guardian 12th August 2004 <http://www.guardian.co.uk/science/2004/aug/12/nuclear.environment>
- (9) Business Green 2<sup>nd</sup> November 2012 <http://www.businessgreen.com/bg/opinion/2221905/the-uk-must-look-to-berlin-to-improve-energy-efficiency>
- (10) Positive Energy: How Renewable Electricity can transform the UK by 2030. WWF October 2011 [http://assets.wwf.org.uk/downloads/positive\\_energy\\_final\\_designed.pdf](http://assets.wwf.org.uk/downloads/positive_energy_final_designed.pdf)
- (11) Guardian 30<sup>th</sup> October 2012 <http://socialenterprise.guardian.co.uk/social-enterprise-network/2012/oct/30/co-operative-energy-solution-climate-change>
- (12) Heinrich Boll 5th July 2012 <http://www.boell.de/climate-transatlantic/index-335.html>
- (13) FT 9th October 2012 <http://www.ft.com/cms/s/0/e45fa824-1203-11e2-bbfd-00144feabdc0.html>
- (14) Independent 18<sup>th</sup> Oct 2012 <http://www.independent.co.uk/news/uk/politics/four-power-stations-worth-of-locallyowned-renewable-schemes-could-be-installed-by-2020-8216613.html>

## 2. Nuclear: Far Fetched and Economically Wrong

Friends of the Earth has published a new briefing entitled: “*Why Government plans for new nuclear reactors are far-fetched, economically wrong and potentially risky for the climate*”.

New nuclear plants are not needed to keep the lights on or to contribute to carbon pollution reductions – indeed the Government's far-fetched plans may endanger these targets unless a 2030 legally binding electricity decarbonisation target is introduced. Nuclear power also brings unique risks not faced by other energy technologies such as nuclear proliferation and long-lived radioactive waste management.

The cost of new nuclear power stations is rapidly increasing. Meanwhile the costs of many renewable technologies such as onshore wind and solar PV are falling rapidly, with significant cost reductions expected for new technologies like offshore wind.

The forthcoming Energy Bill is aiming to provide huge additional subsidies to nuclear power. This is money that would be better spent on renewables and reducing energy use. Renewable energy

technologies offer a great opportunity to build new UK businesses and create more UK jobs than nuclear power. As currently drafted the Energy Bill represents a massive strategic mistake for the UK economy. Friends of the Earth believes the Government should abandon its plans for new nuclear power and instead focus efforts on energy saving, renewable energy and energy storage.

The briefing compliments FoE’s Plan for Clean British Energy: Powering the UK with Renewables and Without Nuclear. (2) This highlights an August 2012 analysis by Imperial College’s Centre for Energy Policy and Technology (ICEPT) which argues that the Government’s cost figures for nuclear power don’t reflect the realities of nuclear construction, with Government under-estimating construction times, cost escalation and financing costs, and over-estimating plant life and load factors. Imperial argue that levelised costs may be over £160/MWh unless cost escalations can be all but eliminated. (3)

- (1) Why Government plans for new nuclear reactors are far-fetched, economically wrong and potentially risky for the climate FoE September 2012 [http://www.foe.co.uk/resource/briefings/nuclear\\_power0.pdf](http://www.foe.co.uk/resource/briefings/nuclear_power0.pdf)
- (2) Plan for Clean British Energy: Powering the UK with Renewables and Without Nuclear, FoE September 2012 [http://www.foe.co.uk/resource/briefings/plan\\_cbe\\_report.pdf](http://www.foe.co.uk/resource/briefings/plan_cbe_report.pdf)
- (3) Imperial College Centre for Energy Policy and Technology, 2012. Cost estimates for nuclear power in the UK. Working paper <https://workspace.imperial.ac.uk/icept/Public/Cost%20estimates%20for%20nuclear%20power%20in%20the%20UK.pdf>

### 3. Horizon Fantasy

Hitachi says it will be five years before construction can begin on any of the planned Horizon nuclear power stations at Wylfa and Oldbury. The company has yet to gain approval from the regulator for its reactor design – the Advanced Boiling Water Reactor (ABWR). Under the previous owners, construction of new reactors at Wylfa was expected to get underway towards the end of 2015 – but now it will be towards the end of 2017 at the earliest. (1)

A lot can happen over five years in the nuclear world. A report by the European Photovoltaics Industry Association shows that, because of rapidly falling prices, photovoltaics (PV) are likely to become a competitive source of electricity in the UK by 2019, without subsidies—not just for householders paying domestic retail prices but also for wholesale generators and large commercial and industrial consumers. (2)

According to New Civil Engineer there are four ABWRs currently in operation in Japan, built to time and budget. (3) But none of these have a capacity factor above 73% and two have capacity factors of less than 45%. A capacity factor is the amount a plant generates compared to the amount that would be generated if it was operating at full power all of the time. Nuclear power plants are costed on the basis that they will achieve capacity factors of 80-90 per cent. With a capacity factor of 45 per cent any nuclear power project comes out needing twice the power price to be an economic proposition. (4)

	Started construction	Commercial Operation	Capacity Factor	Ref
Kashiwazaki-Kariwa-6	3 <sup>rd</sup> November 1992	7 <sup>th</sup> November 1996	72.8%	(5)
Kashiwazaki-Kariwa-7	1 <sup>st</sup> July 1993	2 <sup>nd</sup> July 1997	68.2%	(6)
Hamaoka-5	12 <sup>th</sup> July 2000	18 <sup>th</sup> Jan 2005	44.6%	(7)
Shika-2	20 <sup>th</sup> August 2001	15 <sup>th</sup> March 2006	44%	(8)

In Japan, two further ABWRs – Shimane-3 and Ohma-1 - had started construction when the Fukushima crisis happened, so construction has been suspended. At least six other proposed ABWRs in Japan have been suspended. (9) There are two 1350 MWe Advanced Boiling Water Reactors under construction at Lungmen, near Taipei. Construction began in 1999 with the intention of starting operation in 2004, but due to various problems neither reactor is open yet. (10) Commercial operation is not expected until 2014-15, so they will have taken 16 years to build. (11) Plans to build two Toshiba ABWRs in South Texas were abandoned in 2011. (12)

Hitachi says it will decide whether to invest the estimated £20 billion (£5bn each) required to build the new reactors in four or five years' time, once its reactor design has been approved by regulators. It has enlisted Rolls-Royce and Babcock to provide technical expertise and advice on clearing regulatory hurdles. SNC Lavalin, the Canadian construction group, is also part of the consortium. The sale of Horizon results in an unexpected profit of almost £160 million for E.ON and RWE, which had expected the venture to be sold for closer to £300 million. (13) Senior Lecturer in Energy Policy at Birmingham University, Dave Toke says Hitachi are nuclear constructors - they contract to build plant for other people, it seems unlikely they would take on 100 per cent of the equity in the new reactors never mind 100 per cent of the financing. They did agree to take out a 20 per cent equity investment in a nuclear power plant in Lithuania (which the Lithuanians have just rejected in a referendum). Indeed, because the bulk of the Lithuanian proposal was financed by a state-guaranteed loan, Hitachi's contribution to the projected cost in fact comes out as rather less than 10 per cent. And according to the UK Government there will be no underwriting of construction costs, so the banks would not lend any money. Hitachi would have exactly the same problem as is faced by EDF or, for that matter, any other large company. They would have to finance the lot off their balance sheets. Their shareholders would face big risks and expect big returns, which pushes the required price to be paid for the nuclear electricity higher still. (14)

The FT says drastically reduced business prospects at home have forced Hitachi to take bigger risks to win business abroad. Masaharu Hanyu, head of Hitachi's nuclear division, said Hitachi planned eventually to reduce its ownership to a minority by selling stakes to outside investors. Given the high price it paid for Horizon, the financial success of Hitachi's acquisition will depend on its ability to bring in money from new investors by maximising the start-up's overall value as a utility. It may take some time, however, before Hitachi comes to see itself as an investor rather than a builder. (15) *The Telegraph* says Hitachi would not invest the full £20bn itself so would need to secure financial backing. (16)

Hitachi says it will "immediately work towards achieving license acceptance under the Generic Design Assessment process as governed by the Office for Nuclear Regulation and begin working with our UK partners on the future program". (17) It has "pencilled in" four years to complete the process but there is some "positive thinking" that the GDA could be completed in a shorter period of time because the ABWR is already licensed and operating in other countries and because there are four ABWRs operating in Japan and two under construction in Taiwan. (18)

- (1) Building 30<sup>th</sup> October 2012 <http://www.building.co.uk/news/sectors/infrastructure/five-years-before-construction-can-begin-on-horizon-nuclear/5045147.article>
- (2) Solar Photovoltaics Competing in the Energy Sector, EPIA, September 2011 [http://www.epia.org/index.php?eID=tx\\_nawsecured1&u=0&file=fileadmin/EPIA\\_docs/publications/epia/Competing\\_Full\\_Report.pdf&t=1351772414&hash=3a3e99e5b919aed5060d1f3a9578c827](http://www.epia.org/index.php?eID=tx_nawsecured1&u=0&file=fileadmin/EPIA_docs/publications/epia/Competing_Full_Report.pdf&t=1351772414&hash=3a3e99e5b919aed5060d1f3a9578c827) See also *The Financial Risks of Investing in New Nuclear Power Plants*, Energy Fair, October 2012. [http://www.mng.org.uk/gh/private/risks\\_of\\_nuclear\\_investment.pdf](http://www.mng.org.uk/gh/private/risks_of_nuclear_investment.pdf)
- (3) New Civil Engineer 30<sup>th</sup> October 2012 <http://www.nce.co.uk/news/energy/hitachi-to-build-up-to-nine-new-nuclear-plants-in-uk/8637882.article>
- (4) David Toke's Green Energy Blog 30<sup>th</sup> October 2012 <http://realfeed-intariffs.blogspot.co.uk/2012/10/hitachi-bid-more-fantasy-nuclear-power.html>

- (5) <http://world-nuclear.org/NuclearDatabase/reactordetails.aspx?id=27570&rid=BF928D6F-9277-4E05-BF0F-2658DC973FEA>
- (6) <http://world-nuclear.org/NuclearDatabase/reactordetails.aspx?id=27570&rid=15DA1AEF-B63E-4EBA-827B-7280559C93B1>
- (7) <http://world-nuclear.org/NuclearDatabase/reactordetails.aspx?id=27570&rid=F98DE7C7-0F7F-467C-B98C-8E633BBD50D5>
- (8) <http://world-nuclear.org/NuclearDatabase/reactordetails.aspx?id=27570&rid=A14A17FA-9566-494A-8975-2B6D5F8D41E8>
- (9) Nuclear Power in Japan, WNA, 22<sup>nd</sup> Oct 2012 <http://www.world-nuclear.org/info/inf79.html>
- (10) Nuclear Power in Taiwan, World Nuclear Association, January 2012, [http://www.world-nuclear.org/info/inf115\\_taiwan.html](http://www.world-nuclear.org/info/inf115_taiwan.html)
- (11) World Nuclear Industry Status Report 2012, page 97  
<http://www.worldnuclearreport.org/IMG/pdf/2012MSC-WorldNuclearReport-EN-V2-LQ.pdf>
- (12) [http://en.wikipedia.org/wiki/South\\_Texas\\_Nuclear\\_Generating\\_Station](http://en.wikipedia.org/wiki/South_Texas_Nuclear_Generating_Station)
- (13) Times 31st Oct 2012 <http://www.thetimes.co.uk/tto/business/industries/utilities/article3584943.ece>
- (14) David Toke's Green Energy Blog 30<sup>th</sup> October 2012 <http://realfeed-intariffs.blogspot.co.uk/2012/10/hitachi-bid-more-fantasy-nuclear-power.html>
- (15) FT 30<sup>th</sup> October 2012 <http://www.ft.com/cms/s/0/174ae282-227e-11e2-b606-00144feabdc0.html>
- (16) Telegraph 30th Oct 2012 <http://www.telegraph.co.uk/finance/newsbysector/energy/9644399/Hitachi-unveils-20bn-plan-to-build-nuclear-reactors-in-the-UK.html>
- (17) Platts 30th Oct 2012 <http://www.platts.com/RSSFeedDetailedNews/RSSFeed/ElectricPower/8864896>
- (18) i-Nuclear 30th Oct 2012 <http://www.i-nuclear.com/2012/10/30/hitachi-in-100-year-commitment-to-uk-nuclear-sector-with-700m-purchase-of-horizon/>

#### 4. Do we really have to have a “dash for gas” or nuclear?

At the beginning of October 2012 two groups of companies called on the Government to set a binding 2030 target for decarbonisation of the power sector. One group included more than 50 businesses, such as Asda, Sky and PepsiCo, (1) but the other included nuclear, renewable and carbon capture and storage (CCS) companies. (2) Both groups were in effect supporting the Committee on Climate Change's (CCC) call for almost all of the UK's electricity to come from low-carbon sources by 2030. CCC wants to see emissions reduced to 50 grammes of carbon dioxide per kWh (gCO<sub>2</sub>/kWh) on average compared with 600gCO<sub>2</sub>/kWh now. (3) The committee's scenario for 2030 shows unabated gas generating only 8% of electricity, compared with 30% now, 14% is generated by coal or gas with carbon capture and storage, 40% comes from renewables, but 38% is from nuclear – almost a tripling of nuclear output compared with 2009. (4)

Chancellor George Osborne's aides have made it clear he is against a 2030 target and that he supports a new "dash for gas" and the building of about 20 new gas-fired power stations. At the same time the Government's attempt to revive the nuclear industry are beginning to look like a train wreck and EDF Energy is demanding subsidies which are double or even triple the current cost of electricity. This must be raising questions about how much the Chancellor's support for gas has been influenced by the growing uncertainty that nuclear stations will ever get built. But do we really need to make a choice between a dash for gas and new nuclear reactors?

The Government's plans for gas are unclear, perhaps because it is waiting to see how far the nuclear programme progresses. The Department of Energy and Climate Change (DECC) says it is considering how to square gas power with carbon targets as part of the work underpinning its forthcoming gas generation strategy - due to be published this autumn. But DECC has endorsed 20GW of new gas plant and ambitious carbon targets for 2030 with no explanation yet of how these two are compatible. Generating electricity using gas produces an average of 405gCO<sub>2</sub>/kWh - so using too much gas is incompatible with the CCC's recommended 2030 decarbonisation target. Ultimately this could mean the UK misses its binding 2050 emissions target contained in the climate change act. But Ed Davey

says he sees unabated gas playing an increasing role throughout the 2020s and increasingly as back-up or with carbon capture and storage through the 2030s and 2040s. (5)

At the moment the Energy Bill does not have a target for carbon emissions from the electricity sector by 2030, but despite calls from the Liberal Democrats conference for an emissions target of between 50 and 100gCO<sub>2</sub>/kWh by 2030 to be included in the Energy Bill, Davey has hinted the bill could include a target range, rather than a specific decarbonisation figure, arguing that such an approach would allow for greater flexibility based on the pace of development of low carbon technologies. Friends of the Earth says adopting a decarbonisation "range" instead of a specific target could result in the UK failing to deliver the necessary emissions cuts. (6) All this is beginning to suggest that the Government believes that nuclear could well turn out to be too expensive so we had better keep open the possibility of allowing a dash for gas to avoid the lights going out. But are these really our only choices?

Of course the answer is no. Not planning for a doubling or tripling of electricity demand by 2050 would be a start. Germany, which is planning an entirely non-nuclear route, even with the same 2050 objective of an 80% reduction in greenhouse gases, expects electricity demand to be 25% below present levels by implementing energy efficiency programmes. (7) Not only is energy demand reduction compelling from an economic point of view, because it is far cheaper than building new generating capacity, but it is also key to reducing CO<sub>2</sub> emissions without driving thousands more householders into fuel poverty. The Coalition Government is committed to eradicating fuel poverty by 2016 "as far as reasonably practical", so there clearly needs to be a huge national effort on energy efficiency for low income households in any case. (8) So the obvious question is why are we not planning to refurbish existing households at around 700,000 houses per year? (9)

### Renewable Potential

A WWF report published in October 2011 shows that renewable sources could meet 60% or more of the UK's electricity demand by 2030. By using this amount of renewable energy, we can decarbonise the power sector without resorting to new nuclear power. We will also be able to maintain system security – that is, provide enough electricity at all times to make sure there's never a risk of the 'lights going out'. (10)

We don't need a dash for gas or a new nuclear programme. What we do need is a much larger energy efficiency programme with a focus on avoiding driving millions more low and middle income householders into fuel poverty, and making sure the domestic sector can achieve a reduction in carbon emissions which is commensurate with 2050 targets. We should be aiming to generate around 60% of our electricity requirements with renewable energy by 2030 and any new gas-fired power stations should be part of a strategy to roll out district heating to large parts of the UK. We don't have to choose between reliance on imported gas and environmentally damaging shale gas or new nuclear reactors which produce a toxic waste which we still don't know what to do with.

For a longer version of this article see:

[http://www.no2nuclearpower.org.uk/reports/Do\\_we\\_have\\_to\\_have\\_a\\_dash\\_for\\_gas\\_or\\_new\\_nuclear\\_reactors.pdf](http://www.no2nuclearpower.org.uk/reports/Do_we_have_to_have_a_dash_for_gas_or_new_nuclear_reactors.pdf)

- (1) Guardian 8th October 2012 <http://www.guardian.co.uk/environment/2012/oct/08/firms-tories-2030-carbon-target>
- (2) Times 8th October 2012 <http://www.thetimes.co.uk/tto/news/politics/article3561457.ece> The Letter: <http://www.scribd.com/doc/109332564/The-letter-to-the-Energy-Secretary>
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- (8) Fuel Poverty: Government Response to the Committee's 5th Report, Energy and Climate Change Committee, 19th October 2010  
<http://www.publications.parliament.uk/pa/cm201011/cmselect/cmenergy/541/541.pdf>
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- (10) Positive Energy: How Renewable Electricity can transform the UK by 2030. WWF October 2011  
[http://assets.wwf.org.uk/downloads/positive\\_energy\\_final\\_designed.pdf](http://assets.wwf.org.uk/downloads/positive_energy_final_designed.pdf)

## 5. Is the Government about to start lining the pockets of its nuclear friends?

*"The future of nuclear power in the UK is hanging in the balance"* according to *The Guardian*. (1) Vincent de Rivaz, chief executive of EDF Energy, told MPs at a select committee hearing on 23<sup>rd</sup> October that he still hadn't made up his mind whether to go ahead and build new nuclear reactors in Britain. EDF wants *"further reassurances"* from the government on what assistance the company will receive. De Rivaz told MPs EDF needs *"a compelling business case"* to proceed with the first pair of new reactors at Hinkley Point C in Somerset, the scale of which he compared to the Olympics. But he rejected the idea that he is trying to twist the Government's arm – even though many would say it rather sounds like EDF is blackmailing the Government. (2)

Blackmail or not, it's a far cry from six years ago when de Rivaz said: *"We have not said we wanted subsidies. We are not looking for subsidies. We are looking for a framework which will allow us to invest in low-carbon generation and that includes nuclear."* (3)

The Government will introduce its Energy Bill in November. As we said in our briefing in May after the draft Bill was published, almost everyone outside of Whitehall and EDF agrees that this Bill is about rigging the market and subsidising the nuclear industry. (4) EDF has begun talks with the Department of Energy and Climate Change (DECC) about the guaranteed price it wants for the nuclear electricity it hopes to generate after spending at least £14 billion building Hinkley Point C. According to *The Times*, EDF will need about £165 per megawatt hour (£/MWh), almost four times the existing wholesale price of electricity, if it is to go ahead. This works out at a subsidy of £68 billion over 25 years - £2.8bn every year - or an average of about £50 extra a year on every household bill. (5)

More recently EDF has been speaking to the Government about a "strike price" somewhere between £100/MWh and £140/MWh. (6) As Simon Bullock at Friends of the Earth points out, there will be relief all round if the price turns out to be, say £130/MWh, rather than £165/MWh, but that it still almost three times the going rate for electricity at the moment. (7)

Aside from having the government over a barrel as far as the 'strike price' is concerned, the nuclear industry has also persuaded new energy minister John Hayes to look at underwriting risks somehow. Asked specifically if the government could take construction risk for EDF, he said: *"I wouldn't want*



*to go that far but I'm looking at these things with a fresh mind and I'm considering a whole range of options."* (8) This provoked a group of academics to write to *The Independent* declaring that *"it is clear that construction cost over-runs are highly likely. The taxpayer and consumer must not end up footing a multi-billion pound bill for what seem to be inevitable nuclear construction cost over-runs"*. Of course, just as in 2006 de Rivaz denied he was *"asking the consumers to take the construction risks"* at the Select Committee hearing.

One of the authors of the letter, Dave Toke, senior lecturer in Energy Policy at Birmingham University said this would be a major u-turn in nuclear power policy giving a blank cheque to nuclear constructors. (9) Such options were specifically ruled out, not only by the Conservative Party immediately prior to the 2010 General Election, but also by Ed Davey (Secretary of State at DECC) himself in May. The Conservative Party said in their pre-election energy policy statement in March 2010, called 'Rebuilding Security – Conservative Energy Policy in an Uncertain World': 'we agree with the nuclear industry that taxpayer and consumer subsidies should not and will not be provided – in particular there must be no public underwriting of construction cost overruns'. (10) Ed Davey, in a moment of clarity, declared on May 22nd this year, just as the Energy Bill was published, that: *"There will be no blank cheque for nuclear - unless they are price competitive, nuclear projects will not go ahead."*

At least something positive might come out of this latest debate on nuclear subsidies. The Independent finished its editorial comment saying *"If opponents of the current pro-nuclear strategy are to make headway, they must articulate an alternative course more clearly."* Somebody at *The Independent* hasn't been paying attention because as Greenpeace points out, the conversation about how to avoid building 16GW of new nuclear capacity has been going on for some time. (12)

The Government's Committee on Climate Change says 65% of our electricity could come from renewables by 2030 – or more electricity than we would need after implementing a proper efficiency programme. (13) Several well respected reports such as the European Climate Foundation's Roadmap 2050 report (14) and the Offshore Valuation Report (15) have made it clear that it is technically feasible for the UK and the EU to receive the overwhelming majority of their electricity from renewable sources without endangering the reliability of the electricity system (and at costs not substantially higher than other ways of decarbonising the power sector), as long as the UK significantly improved its interconnection infrastructure with other European grids. In particular the Offshore Valuation Report highlights that by using 29% of the UK's practical offshore resource, the offshore renewables industry could enable the UK to install 169GW of offshore renewable capacity, thus allowing the country to become a net exporter of electricity by 2050. A WWF report published in October 2011 shows that renewable sources could meet 60% or more of the UK's electricity demand by 2030. By using this amount of renewable energy, we can decarbonise the power sector without resorting to new nuclear power. (16)

It is widely agreed that energy prices will increase over the next 20 years, regardless of whether we switch to low carbon generation. Not only is energy demand reduction compelling from an economic point of view, because it is far cheaper than building new generating capacity, but it is also key to reducing CO<sub>2</sub> emissions without driving thousands more householders into fuel poverty. (17) Even DECC itself says we could reduce electricity consumption by 40% by 2030. (18) The Coalition Government is committed to eradicating fuel poverty by 2016 *"as far as reasonably practical"*, so there clearly needs to be a huge national effort on energy efficiency for low income households in any case. (19) Added to that our 26 million UK households are responsible for around 27% of greenhouse gas emissions which will have to be tackled in order for the domestic sector to make the required contribution to the UK's target of reducing greenhouse gas emissions by 80% by 2050. So the obvious question is why aren't we planning to refurbish existing households at around 700,000 houses per year? (20)

Yet, even though the Select Committee has already criticised the Energy Bill for its neglect of energy efficiency, DECC says it will consider a consultation on demand-side policies but separately from the energy bill. *The Economist* calls this “a shame”. (21) Others might call this proof that the Government is more interested in lining the pockets of its friends in the Big Six utilities than helping poor consumers struggling to keep warm as fuel prices go through the roof.

- (1) Guardian 23rd Oct 2012 <http://www.guardian.co.uk/environment/2012/oct/23/future-nuclear-power-uk-edf>
- (2) FT 23rd Oct 2012 <http://www.ft.com/cms/s/0/24619bee-1d2b-11e2-abeb-00144feabdc0.html>
- (3) Guardian 11<sup>th</sup> October 2006 <http://www.guardian.co.uk/business/2006/oct/11/politics.nuclearindustry>
- (4) Broken Promises: Subsidising the Nuclear Industry, Spinwatch May 2012 <http://www.spinwatch.org.uk/images/stories/NuclearSubsidies.pdf>
- (5) Times 15<sup>th</sup> July 2012 <http://www.thetimes.co.uk/tto/business/industries/utilities/article3476326.ece>
- (6) Business Green 8th October 2012 <http://www.businessgreen.com/bg/news/2215320/reports-edf-demands-confirmation-of-support-for-hinkley-point>
- (7) Friends of the Earth 24<sup>th</sup> September 2012 [http://www.foe.co.uk/blog/shoplifters\\_nuclear\\_37256.html](http://www.foe.co.uk/blog/shoplifters_nuclear_37256.html)
- (8) Telegraph 6th Oct 2012 <http://www.telegraph.co.uk/finance/newsbysector/energy/9591653/Government-mulls-underwriting-risk-of-new-nuclear-plants.html>
- (9) David Toke's Green Energy Blog 7<sup>th</sup> Oct 2012 <http://realfeed-intariffs.blogspot.co.uk/>
- (10) See page 18 <http://www.conservatives.com/~media/Files/Green%20Papers/Rebuilding-Security.ashx?dl=true>
- (11) BBC 22<sup>nd</sup> May 2012 <http://www.bbc.co.uk/news/business-18144412>
- (12) Energy Desk 22nd October 2012 <http://www.greenpeace.org.uk/newsdesk/energy/analysis/viewpoint-four-ways-go-beyond-nuclear>
- (13) <http://hmccc.s3.amazonaws.com/Renewables%20Review/Executive%20summary.pdf>
- (14) Roadmap 2050: A Practical Guide to a Prosperous, Low-Carbon Europe, European Climate Foundation, April 2010, <http://www.roadmap2050.eu/downloads> See Exec Summary to Volume 1.
- (15) The Offshore Valuation Report: A valuation of the UK's offshore renewable energy resource, 2010, [http://www.offshorevaluation.org/downloads/offshore\\_valuation\\_exec.pdf](http://www.offshorevaluation.org/downloads/offshore_valuation_exec.pdf)
- (16) Positive Energy: How Renewable Electricity can transform the UK by 2030. WWF October 2011 [http://assets.wwf.org.uk/downloads/positive\\_energy\\_final\\_designed.pdf](http://assets.wwf.org.uk/downloads/positive_energy_final_designed.pdf)
- (17) Murray, J “Energy bills to rise £500 due to low carbon plans – or more likely not”, Business Green 17th December 2010 <http://www.businessgreen.com/bg/james-blog/1933425/energy-bills-rise-gbp500-low-carbon-plans>
- (18) See <http://www.decc.gov.uk/en/content/cms/emissions/edr/edr.aspx>
- (19) Fuel Poverty: Government Response to the Committee's 5th Report, Energy and Climate Change Committee, 19th October 2010 <http://www.publications.parliament.uk/pa/cm201011/cmselect/cmenergy/541/541.pdf>
- (20) Thorpe, D. Low Carbon Kid Blog, June 8th 2010 [http://lowcarbonkid.blogspot.com/2010\\_06\\_01\\_archive.html](http://lowcarbonkid.blogspot.com/2010_06_01_archive.html)
- (21) Economist 20<sup>th</sup> October 2012 [http://www.economist.com/news/britain/21564862-not-enough-being-done-cut-demand-electricity?fsrc=scn/tw\\_ec/hot\\_under\\_the\\_collar](http://www.economist.com/news/britain/21564862-not-enough-being-done-cut-demand-electricity?fsrc=scn/tw_ec/hot_under_the_collar)

## 6. Campaign for an Energy Bill to Save

A new report published today by Green Alliance and WWF-UK argues that the upcoming Energy Bill must incentivise energy efficiency and create a ‘market’ for electricity savings. The report highlights research commissioned by the Government, which found that effective measures to reduce electricity use could mean that 40 per cent of electricity demand might be avoided by 2030 – equivalent to the output of 15 nuclear power plants - saving in excess of £10 billion per year. (1) The research shows that current policies to tackle energy demand are not ambitious enough and will only deliver a third of the UK's electricity saving potential by 2030. The draft Energy Bill however contains nothing to fill

this gap – it only puts in place policies that pay for new low carbon supply and contains nothing that will reduce demand for electricity.

Green Alliance has looked at three ways that the government's Electricity Market Reform could help reduce demand for electricity. The research finds that, of the three options considered, an electricity efficiency feed-in tariff (EE FiT) - a new financial incentive for energy saving – will be the most effective and simple means to lower consumers' energy bills. An electricity efficiency FiT would stimulate a new market for 'negawatts' (saved energy) allowing new and existing companies to compete with each other to find innovative ways to help consumers across the economy save electricity.

Without amendment, the Energy Bill will reward the building of expensive power stations ahead of cheaper energy efficiency and that consumers will pay over the odds for their electricity as a result. Drawing on international experience the report demonstrates how the UK can learn from energy demand reduction programmes abroad; schemes in the USA show that it is much cheaper to reduce demand when compared with building new supply. For example, replacing inefficient appliances with new efficient ones costs on average £33/megawatt hour (MWh) compared with the cheapest low carbon supply costing £83/MWh. (2)

In response to mounting pressure from this compelling Green Alliance report and the Association for the Conservation of Energy, ministers at the Department of Energy and Climate Change (DECC) appear increasingly willing to accept that the Energy Bill should include measures to promote efficiency. Ed Davey has been hinting strongly that he wants to see the Energy Bill's planned "capacity mechanism" include an element to drive "demand management" and "demand response". In other words he wants to see more incentives to encourage businesses and households to save power, particularly at times of peak demand.

There is also a case for complementing any new incentives with a simpler and more cost effective mechanism for driving efficiency: standards. Energy efficiency standards and their policy cousins, mandatory labelling schemes, differential taxes, green procurement standards, and outright bans on inefficient products, remain one of the most effective means of driving both the adoption of energy efficiency measures and the development of new efficient technologies. (3)

Juliet Davenport, CEO of Good Energy, says the Energy Bill is a once-in-a-lifetime opportunity to create the cleaner, greener economy we need, but the proposals so far are mainly designed to encourage investment in large-scale low-carbon electricity generation. In almost exclusively focussing on just building new centralised types of power plants the Bill risks making the job more difficult than it needs to be in the long run. It should recognise the value of smaller-scale, decentralised forms of renewable generation, from domestic solar panels to community wind farms. We need a more dynamic system which relies less on centralised, fossil fuelled power plants, and makes the most of the renewables by developing them at a range of sizes. It needs to include a new electricity demand-management policy so that consumers can access goods and services to reduce their reliance on power from dirty electricity generation. The intermittent nature of renewable power is well known, and whilst suppliers like Good Energy have successfully learnt to manage that, the Bill could make it easier. One way of doing that is to ensure that consumers can access the kind of technologies and services that limit unnecessary power usage at certain times reducing the need for gas-fired back-up power plants. (4)

Germany has a virtually identical climate change commitment, of 80 per cent lower greenhouse gas emissions in 2050 than today. But in contrast the Berlin government equivalent is postulating a 25 per cent reduction in electricity consumption, together with a 53 per cent overall reduction in primary energy use (3,942 to 1,950 TWh). On most of the scenarios within the UK's Pathways exercise, the

UK's per capita 2050 energy consumption is due to become 20 per cent (23.7 as opposed to 19.7 MWh) bigger than in Germany - in some scenarios, the gap will be far larger. The difference in consumption levels between what the UK Chief Scientist is projecting for us, and where the German government thinks electricity demand can be, is simply explained. The German policy was created after analysis of the cost optimal approach, an exercise we in the UK have yet to undertake seriously. The German government emphasises that cutting out waste is far more cost-efficient than building new power stations, large or small. As it happens, no new nuclear plants have been built in Germany for 25 years - just as here. But whereas our government projects a family of up to ten new nuclear fission plants, nobody in Germany plans to build any. (5)

- (1) Business Green 16<sup>th</sup> Oct 2012 <http://www.businessgreen.com/bg/news/2217233/energy-efficiency-subsidy-could-cut-uk-demand-40-per-cent>
- (2) Creating a Market for Electricity Savings, Green Alliance, WWF, October 2012 [http://assets.wwf.org.uk/downloads/creating\\_a\\_market\\_for\\_electricity\\_savings\\_oct\\_2012.pdf](http://assets.wwf.org.uk/downloads/creating_a_market_for_electricity_savings_oct_2012.pdf)
- (3) Business Green 5<sup>th</sup> November 2012 <http://www.businessgreen.com/bg/james-blog/2222213/we-need-progress-on-energy-efficiency-so-why-are-we-so-coy-about-ditching-inefficient-products>
- (4) Energy Desk 3<sup>rd</sup> Oct 2012 <http://www.greenpeace.org.uk/newsdesk/energy/analysis/it%E2%80%99s-time-move-business-usual%E2%80%A6>
- (5) Business Green 2<sup>nd</sup> November 2012 <http://www.businessgreen.com/bg/opinion/2221905/the-uk-must-look-to-berlin-to-improve-energy-efficiency>

## 7. German Energy Transition

There has been a spate of attacks in the media recently particularly in the letters columns, on the German nuclear phase-out. The Scientific Alliance said in *The Times* (1) that German consumers now pay 60 per cent more for electricity than we do, the second highest price in Europe. Danish consumers are even worse off, said the letter, paying almost twice as much as their UK counterparts, largely because of the country's high reliance on wind energy.

Despite having relatively high *prices*, German face only modest energy *costs*, because of low consumption. Overall, a German family spend on average only 0.3% of its income on renewable. (2) The average German family has seen its monthly power bill nearly double from 2000, when it was 40.66 euros, to 75.08 euros in 2012, which would make German power bills among the least expensive in a ranking of US states, for instance, even though the price of a kilowatt-hour in Germany is near the top of what is paid in the US. Clearly, there is a difference between price and cost, and Germans have reacted sensibly to their higher power prices by switching to more efficient technologies. In the UK, allowing for the daily service charge, which has just increased by 16% I will be paying around £0.196 per kWh over the next year or \$0.32/kWh compared with \$0.33 in Germany.

The electricity price for German households has largely increased because of higher costs for generation, transport and distribution of conventional fuels (and a small amount due to renewables). (3) In the past year the renewable subsidy has raised domestic energy cost by 7%, but industry energy costs have been lowered by 18%. So households are subsidizing industry. (4)

Jack Straw MP recently claimed that Germany faced an "energy crisis" after abandoning nuclear power. And he predicted a "*flight of manufacturing to eastern Europe or elsewhere in the world*" due to higher costs. (5) Ironically the reverse is true. Germany is getting even more attractive for energy intensive industries because renewables are driving down the prices of the wholesale market. Renewable energy has lowered wholesale power prices for industry by an estimated 18-20 percent over the past year. (6) In fact, power for industry has been considerably lower in Germany than in neighbouring France. (7) Not surprisingly, Germany is attracting energy-intensive firms. (8) Nonetheless, German industry fervently continues to express its concern about how renewables could raise prices so that people don't realize how much it is currently benefiting from renewables. (9)

If the German surcharge for renewables was correctly designed, it would be much lower. But households have to carry most of the burden and are subsidizing industry which receives too generous exemptions. In addition, the high supply of renewable electricity has driven down prices for industry on the wholesale market by at least 18% over the last year. (10)

It's clear that much of the push towards a clean energy transition in Germany will have to come from a bottom-up approach at the local level. In Germany, such a rural and small-town revolution is currently underway where many different groups are forming energy cooperatives. The goal of these communities is clear: they strive with pride to become 100% self-sustainable renewable energy communities. In the past five years alone, more than 500 new renewable energy cooperatives have sprung up. They are replacing fossil fuel imports with renewable biomass, wind and solar power and buying back the local transmission lines. To highlight some of these local successes, the Heinrich Böll Foundation in cooperation with the Institute for Energy and Environmental Research (IEER) organized a public speaking tour which brought two leading cooperative experts from Germany to the Midwestern states of Minnesota, Iowa and Wisconsin in June 2012. (11)

Weekly — if not more often — a new broadside appears and makes the rounds of generally right-wing blogs and talk shows. The latest talking point is that Germany is burning more coal than ever because of the nuclear phase-out and all the intermittent renewables that have been added to the system. German use of coal to generate electricity has declined steadily from 1990 to 2011, according to readily available statistics on the German electricity system. The percentage of coal-fired electricity in German electricity generation has fallen from 56.7% in 1990 to 43.5% last year—a decrease of more than 10% despite an increase in total electricity generation during the same period of about 10%. At the same time the share of renewable energy in the electricity mix has increased from 3.6% to 19.9%, mostly due to the rapid development of wind energy and biomass. (12)

In Germany, more than a decade after the liberalisation of the sector, the number of public utilities continues to rise - and they are likely to take on more significance as Chancellor Angela Merkel's Energiewende, or "energy transition" away from nuclear, advances. "The trend in the energy market is towards a return to public and communal ownership," says Hans-Joachim Reck, managing director of VKU, an association of communal groups. It says more than 170 electricity and gas grid concessions, usually lasting 20 years, have been won by local public utilities since 2007. In the same period, 60 new ones have been founded. VKU expects this number to grow. Big cities such as Munich, Cologne and Hamburg already have public utilities. Berlin and Stuttgart, as well as many smaller towns and cities, are debating the idea. One example is the small south German town of Schönau which took over the local power grid in 1997. Today, the co-operative sells its renewable energy mix all over the country. Last year's profits were €1.3m. (13)

The peak price of electricity in Germany is falling steadily, giving their industry a competitive advantage. The peak price is falling because the amount of solar photovoltaic (PV) electricity is rising exponentially. In summer or winter, PV systems in Germany supply cheap electricity with maximum power around noon, when the sun is highest. The peak demand, and therefore peak price of electricity, also occurs around noon. In the UK, an all-renewable electricity supply would be even easier than Germany because the monthly wind variation and evening electricity demand match. (14)

For more information see "Myths and Facts about the German Switch from Nuclear to Renewables" Heinrich Böll Foundation March 2012. [http://www.boell.org/downloads/Morris\\_Myths\\_about\\_German\\_energy.pdf](http://www.boell.org/downloads/Morris_Myths_about_German_energy.pdf)

- (1) Times 15<sup>th</sup> October 2012 <http://www.thetimes.co.uk/tto/opinion/letters/article3567977.ece>
- (2) Renewables International 4<sup>th</sup> Oct 2012 <http://www.renewablesinternational.net/renewables-03-of-average-german-household-budget/150/537/57258/>
- (3) See <http://www.unendlich-viel-energie.de/en/details/article/4/comparison-of-electricity-prices.html>

- (4) Renewables International 15<sup>th</sup> October 2012 <http://www.renewablesinternational.net/renewables-raise-german-retail-power-rate-by-7-percent-but-lower-industry-prices-by-18-percent/150/537/57492/>  
See also: <http://energytransition.de/>
- (5) BBC 23rd Oct 2012 <http://www.bbc.co.uk/news/uk-politics-20045473>
- (6) Renewables International 10<sup>th</sup> Oct 2012 <http://www.renewablesinternational.net/how-the-german-re-surcharge-should-be-redesigned/150/537/57443/>
- (7) Renewables International 5<sup>th</sup> October 2012 <http://www.renewablesinternational.net/german-baseload-power-cheaper-than-french-12-months-running/150/537/57302/>
- (8) Renewables International 8<sup>th</sup> September 2012 <http://www.renewablesinternational.net/german-renewables-surcharge-designed-to-skyrocket/150/537/56247/>
- (9) Renewables International 26<sup>th</sup> September 2012 <http://www.renewablesinternational.net/chemicals-industry-warns-merkel-about-renewables/150/537/56897/>
- (10) Renewables International 15<sup>th</sup> October 2012 <http://www.renewablesinternational.net/renewables-raise-german-retail-power-rate-by-7-percent-but-lower-industry-prices-by-18-percent/150/537/57492/>
- (11) Heinrich Boll 5th July 2012 <http://www.boell.de/climate-transatlantic/index-335.html>
- (12) Renew Economy 4th October 2012 <http://reneweconomy.com.au/2012/how-renewables-are-replacing-coal-fired-generation-in-germany-33022>
- (13) FT 9th October 2012 <http://www.ft.com/cms/s/0/e45fa824-1203-11e2-bbfd-00144feabdc0.html>
- (14) Guardian 23rd Oct 2012 <http://www.guardian.co.uk/environment/2012/oct/23/carbon-limit-electricity-generation>

## 8. Post Fukushima Safety Improvements

EDF Energy is putting considerable effort and resources into implementation of safety enhancements resulting from Fukushima lessons learned studies, but progress to date is limited according to the Office for Nuclear Regulation (ONR). (1) ONR says it is satisfied that EDF Energy has an acceptable programme underway or there is good evidence that one is being developed for about half of the ONR stress test lessons learned recommendations and findings. But EDF Energy has a large backlog of safety issues to deal with and has yet to complete half of the recommended changes (62 out of 126).

ONR identified some areas where there may be shortfalls including provision of back-up control room facilities. (2) In fact more than 400 of the recommendations made to improve the safety of British nuclear plants after the Fukushima nuclear accident in Japan last year still have to be implemented. The recommendations are designed to improve the ability of nuclear facilities to withstand extreme weather and severe accidents. They include better protection against floods, fires, storms, snow and earthquakes, as well as improved back-up power supplies in emergencies.

Military sites like the nuclear bomb factory at Aldermaston in Berkshire and the nuclear submarine yard at Devonport in Plymouth have been the slowest to match the ONR's timetable. Of the 178 recommendations that apply to UK defence sites, 70% (120) have so far failed to meet ONR's expectations.

Overall, 58% (426) of all the 747 safety recommendations made for all UK nuclear sites are defined by ONR as not yet closed. Nearly a third (265) are described by ONR as needing "further development or provision of evidence/information before ONR can be content that they adequately address expectations." (3)

Meanwhile, Stress Tests carried out at the EU's 143 reactors have exposed hundreds of problems which could need €25 billion in order to restore proper plant safety. (4) The EC report on the Stress Tests shows that 19 UK reactors at nine sites have 108 problems. The sites are Dungeness in Kent, Hartlepool in County Durham, Heysham in Lancashire, Hinkley Point in Somerset, Hunterston in North Ayrshire, Oldbury in South Gloucestershire, Sizewell in Suffolk, Torness in East Lothian and Wylfa in Gwynedd. According to the EC, the flaws fall mostly into six categories. Emergency operating procedures and "severe accident" management guidelines fail to cover all the plant's

possible conditions, though improvements are said to be planned. In some cases "passive measures to prevent hydrogen explosions in case of severe accident not in place," warns the report. It also says that back-up emergency control rooms are not available, nor are back-up diesel generators "physically separated" from normal generators, or mobile diesel generators. The pressurised water reactor at Sizewell, a different design from other UK plants, is criticised because "filtered venting systems not in place". (5)

Nearly all of Europe's operating reactors will need some safety improvements to be able to deal with extreme emergencies, and the cost of the safety upgrade could range between €30 million €200 million per reactor, making the overall price tag between €10 billion and €25 billion. There are 134 reactors currently in operation in the EU. (6) The European Commission vowed there would be "no complacency" when it comes to nuclear safety in Europe despite "hundreds of defects" revealed by stress tests especially in France which has 58 of Europe's 145 nuclear reactors. (7)

The European Commission intends to propose new laws next year, including on insurance and liability to "improve the situation of potential victims in the event of a nuclear accident". (8)

On new reactors EDF and Areva have so far closed out only nine of the original 31 GDA Issues and are currently at risk of extending the program into 2013. Even if EDF and Areva are successful in closing out the 22 remaining GDA issues on the UK EPR by the end of the year as planned, one critic fears they will do so only by shifting unanswered safety questions into the licensing phase of the new reactors. Nuclear engineer and industry critic John Large says this could turn EDF's planned project for two EPR reactors at Hinkley Point C into an "Olkiluoto-3"-style situation with cost overruns and project delays inevitable as regulators grapple with last minute design changes. The ONR disputes Large's criticism. (9)

- (1) ONR 31<sup>st</sup> October 2012 <http://news.hse.gov.uk/onr/2012/10/onr-publishes-progress-report-on-fukushima-lessons-learned/?ebul=gd-nuclear&cr=01/oct-12>
- (2) i-Nuclear Monthly November 2012. <http://www.i-nuclear.com/i-nuclear-monthly>
- (3) RobEdwards 1<sup>st</sup> November 2012 <http://www.robbedwards.com/2012/11/400-fukushima-safety-recommendations-not-yet-met-in-uk.html>
- (4) Independent 4<sup>th</sup> Oct 2012 <http://www.independent.co.uk/news/world/europe/europes-dangerous-nuclear-plants-need-25bn-safety-refit-8196457.html>
- (5) RobEdwards 5<sup>th</sup> Oct 2012 <http://www.robbedwards.com/2012/10/109-problems-with-19-uk-reactors-says-ec.html>
- (6) Simply Info 1<sup>st</sup> Oct 2012 <http://www.simplyinfo.org/?p=7592>  
Guardian 4<sup>th</sup> Oct 2012 <http://www.guardian.co.uk/environment/2012/oct/04/energy-chief-nuclear-safety-report>
- (7) EU Business 1<sup>st</sup> Oct 2012 <http://www.eubusiness.com/news-eu/energy-nuclear.ilu>
- (8) Euractiv 2<sup>nd</sup> Oct 2012 <http://www.euractiv.com/energy/leaked-report-nuclear-sector-nee-news-515138>
- (9) i-Nuclear 25<sup>th</sup> Oct 2012 <http://www.i-nuclear.com/2012/10/25/edf-says-strike-price-wont-cover-construction-risk-finished-design-proof-against-overruns/>

## 9. Is Waste Dump Search Grinding to a Halt?

The three local authorities in Cumbria that have been working with the government to consider hosting an underground nuclear waste repository have postponed making a decision for three more months, until January 2013. The councils were due to vote October 11 about whether to proceed to the next stage of the UK government's Managing Radioactive Waste Safely (MRWS) process. The borough councils of Copeland and Allerdale and the cabinet committee of Cumbria County Council were scheduled to meet separately to discuss a decision on whether to proceed to the next stage, which would involve the government performing "desk-based" studies on potential sites for the underground repository.

On October 2, the councils opted to request more time before the scheduled votes occurred. The councils said in a press statement that they needed more time to seek further information and clarification from the national government on “a number of issues they believe are key to the issue of trust.” One of these issues is the right of withdrawal. The Government says the Councils would still be able to withdraw from the process up until the point when work could start on building a repository. However, the Councils “want to get a better understanding of the detail and timescale involved in meeting the Government’s commitment to make this right of withdrawal legally binding”. Another issue is the Government’s promise to provide a package of community benefits to any area where a repository is built. (1)

Warnings from Jamie Reed, the Labour MP for Copeland that Cumbria County Council might vote against carrying on with negotiations with the Government about the search for a nuclear waste dump a meeting on October 11 may have encouraged councillors to delay making a decision rather than voting against. Sir David King, former Chief Scientific Adviser to Tony Blair and Gordon Brown warned that if the council were to vote against the plans, it could seriously delay the Government’s talks with EDF Energy over new reactors. (2)

Speaking at a ‘fringe’ meeting at Labour Party Conference sponsored by Britain’s Energy Coast and Nuclear Management Partners, Reed said there is no Plan B for the West Cumbrian economy without nuclear support. He urged the government to speed up finding the best solution for dealing with plutonium and uranium stockpiles and said a deep geological disposal facility had to be a national priority. Britain’s Energy Coast, head of projects David Jones said the group’s blueprint for the economic future of West Cumbria estimated the possibility of generating a further 3,000 jobs over the next 15 years. (3) •

The rumours that the Councils might vote against proceeding also seem to have led to the 3 Council leaders being summoned to a meeting in London with the new minister responsible for implementing geological disposal Baroness Verma. (4)

The Councils wrote to Baroness Verma after their meeting with her to explain their decision to postpone making a decision. They plan to use the extra three months to ensure funding for community representatives to monitor and scrutinise the work if the detailed study does go ahead. (5) The Councils want more information from the Government on a string of issues including the right to withdraw from the process and clarification on a package of “community benefits”. The West Cumbria Managing Radioactive Waste Safely Partnership report said “*a lack of trust appears to us to be at the root of many of the key concerns*”. (6)

The delay may not be long enough. The postponement is supposed to allow detailed studies and investigations about potential locations to take place. The Cumbria Association of Local Councils (CALC) has welcomed holding off committing to the next stage of the search but doubts that the proposed three months delay will give sufficient time to clarify all the matters of concern. (7)

Although nowhere in Cumbria has been ruled out, apart from the areas ruled out by BGS, (See map here <http://mrws.decc.gov.uk/assets/decc/mrws/866-mrws-factsheet-sub-surface-unsuitability.pdf>) two highly sensitive areas, that could be investigated further, have now been identified by one geologist. These are Eskdale in the South West Lakes and Silloth in the North Lakes areas. Former Nirex inquiry inspector, Chris McDonald, criticised the current plans. He said: "I was very surprised to find that West Cumbria was being floated once more as a potential site. I think the probability of their finding a suitable site is low." Dr Keith Baverstock is a former member of CoRWM "This process of voluntarism seems to me to be ludicrous. You need to know when you ask people whether



you can bury your radioactive waste in their back gardens, whether it's feasible to actually do it. It's the wrong way round," he insisted. (8)

When asked why the Council hadn't just pulled out of the process altogether, rather than postponing a decision, Council Leader Eddie Martin said "*the reason we are going on is because otherwise the government might force the facility on us*". A peculiar kind of voluntarism indeed. (9)

A new website has been launched – Solway Plain Against Nuclear Dump – by a group of residents of Silloth and the surrounding area, who are extremely concerned about the area being used as a proposed underground repository for high level nuclear waste. (10)

- (1) i-Nuclear 2<sup>nd</sup> Oct 2012 <http://www.i-nuclear.com/2012/10/02/english-county-asks-for-more-time-to-consider-hosting-uks-nuclear-waste-dump/>
- (2) Times 21st Sept 2012 <http://www.thetimes.co.uk/tto/business/industries/utilities/article3545076.ece>
- (3) Whitehaven News 18<sup>th</sup> Oct 2012 <http://www.whitehavennews.co.uk/news/no-plan-b-without-nuclear-says-mp-1.1005698?referrerPath=news>
- (4) Radiation Free Lakeland 21<sup>st</sup> September 2012 <http://mariannewildart.wordpress.com/2012/09/21/arm-twisting-of-the-cumbrian-stooges/>
- (5) Guardian 5<sup>th</sup> Oct 2012 <http://www.guardian.co.uk/uk/the-northerner/2012/oct/03/three-month-delay-nuclear-waste-burial-cumbria>
- (6) Cumberland News 3rd Oct 2012 <http://www.cumberlandnews.co.uk/cumbrian-councils-defer-decision-on-underground-nuclear-waste-store-1.1001532?referrerPath=business>
- (7) Carlisle News and Star 6<sup>th</sup> October 2012 <http://www.newsandstar.co.uk/news/business/worries-cumbrian-councils-nuclear-repository-decision-delay-may-not-be-long-enough-1.1002711>
- (8) BBC 8th Oct 2012 <http://www.bbc.co.uk/news/uk-england-cumbria-19816861>
- (9) Radiation Free Lakeland 12<sup>th</sup> Oct 2012 <http://mariannewildart.wordpress.com/2012/10/12/truth-to-power-no-nuke-dump/>
- (10) [www.spand.org.uk](http://www.spand.org.uk)

## 10. Moorside Confusion

The Sunday Times reported at the end of September that Iberdrola had pulled out of the NuGen consortium which was planning to build a new nuclear station adjacent to Sellafield known as Moorside. The paper said the Spanish company was grappling with energy taxes and deteriorating cash-flows at home, and so had told its partner – GDF-Suez - that it could not proceed. SSE dropped out last year. (1) But later NuGen insisted that both partners were 100% committed to the project. (2)

Iberdrola said it would not comment on reports it was pulling out. (3) The chairman's of Britain's Energy Coast, former Labour energy minister Brian Wilson, said he has received assurances "*at the highest level*" that plans for nuclear new build at Sellafield remain on track. (4)

According to *The Independent* industry insiders are, in fact, more concerned that Iberdrola's partner, GDF Suez, might eventually be the one which chooses not to proceed with NuGen. (5) The Sunday Times claimed on 28<sup>th</sup> October, despite the earlier denials, that the NuGen consortium had disintegrated. (6)

See Nuclear Pull-outs, Rumours and Threats, No2NuclearPower Briefing, October 2012  
[http://www.no2nuclearpower.org.uk/reports/Nuke\\_Pullout\\_Costs.pdf](http://www.no2nuclearpower.org.uk/reports/Nuke_Pullout_Costs.pdf)

- (1) Sunday Times 30th Sept 2012  
[http://www.thesundaytimes.co.uk/sto/business/energy\\_and\\_environment/article1136794.ece](http://www.thesundaytimes.co.uk/sto/business/energy_and_environment/article1136794.ece)
- (2) City AM 1<sup>st</sup> Oct 2012 <http://www.cityam.com/latest-news/iberdrola-mulls-exit-uk-nuclear-project>
- (3) i-Nuclear 1st Oct 2012 <http://www.i-nuclear.com/2012/10/01/iberdrola-silent-on-pull-out-from-uk-nuclear-joint-venture-but-nugen-says-reports-untrue/>

- (4) Cumberland News 5th Oct 2012 <http://www.cumberlandnews.co.uk/sellafield-nuclear-power-station-plans-still-on-track-says-britain-s-energy-coast-chief-1.1002325?referrerPath=business>
- (5) Independent 7th October 2012 <http://www.independent.co.uk/news/business/analysis-and-features/clouds-are-gathering-overbritains-new-nuclear-dawn-8200600.html>
- (6) Sunday Times 28<sup>th</sup> October 2012 [http://www.thesundaytimes.co.uk/sto/business/energy\\_and\\_environment/article1156393.ece](http://www.thesundaytimes.co.uk/sto/business/energy_and_environment/article1156393.ece)

## 11. Electricity Market Reform and the Levy Cap

The Treasury will never agree to raise the levy cap so that DECC can fund both new nuclear and fulfil renewable obligations, says Tom Burke. It is required by law to deliver about 30% of its electricity from renewables by 2020. And it has announced that it wants 16GW of new nuclear by 2025. Together, it supposes, this will be enough meet its climate change targets without the lights going out. The government seems not to have noticed that its own Treasury will prevent this from happening.

The levy control framework is the Treasury's device for ensuring that the Department of Energy and Climate Change (DECC) does not spend too much meeting its energy and climate goals. This simply sets a cap on how much levy can be collected each year. If the cap is breached, DECC has to pay the difference from within its existing spending limits. The current cap is £2.6bn a year and will rise to about £3.87bn by 2015. Here's the rub. To get the 16GW of new nuclear by 2025 DECC wants will be expensive. On the most optimistic estimates this will require a levy of £5.5bn a year by 2024. More realistic estimates make this £12.6bn a year. Even if there is no increase at all in the subsidy for renewables the levy cap would have to rise to more than £16bn a year. Anyone who thinks that the Treasury will agree to a levy cap this large is dreaming.

Guardian 16<sup>th</sup> Oct 2012 <http://www.guardian.co.uk/environment/2012/oct/16/nuclear-ed-davey-energy-treasury?intcmp=122>

## 12. The Quad

Senior coalition figures were meeting on 17<sup>th</sup> October for crisis talks about the UK's stalling energy investment programme amid growing political concern about the rising cost of customer bills and threats by power station companies to pull out of the UK because of delays. Ministers were expected to finalise the UK gas investment strategy and key elements of the forthcoming Energy Bill. Both the prime minister David Cameron and his deputy, the Lib Dem leader Nick Clegg, appear to be frustrated and worried by a continuing dispute, between the Department of Energy and Climate Change and the Treasury about the amount of subsidy available for renewables and the number of gas-fired power stations likely to be built. Concerns arose following a series of warnings by major investment companies that they might quit the UK. Seven global electricity and nuclear giants, including Alstom and Mitsubishi, who between them employ tens of thousands of workers, threatened to reassess their investment plans because lack of decision-making and threats to axe key green targets had raised the "political risk" of the UK. (1)

Meanwhile, the future role of gas in the UK power sector has become a central object of controversy in UK energy policy. The debate often focuses on irreconcilable views about the future price of gas. A new E3G study highlights the financial risks the UK could face by pursuing a new dash for gas. The analysis tells a compelling story about the need to manage the impact of too much unabated gas generation and the advantages of continued support for renewable energy deployment, energy efficiency and Carbon Capture and Storage (CCS) demonstration to contain the cost and manage the risks of power sector decarbonisation.

E3G says asking what the future price of gas might be is the wrong question. The right question is how different policy approaches to incentivising investment in the UK power sector would perform in delivering UK decarbonisation goals in an affordable and secure manner **under all plausible futures**. The study shows that a policy approach that solely uses carbon prices to drive investment would tend to favour a gas-heavy decarbonisation pathway, and as a result, this would underestimate cost and policy delivery risks to delivering low-carbon investment. In comparison, where technology specific support to renewables continues, power sector costs are more predictable.(2)

In the midst of extensive media discussion about how much renewables cost, compared with the cost gas, especially if the UK allows fracking to go-ahead, the costs of nuclear power hasn't attracted as much attention. But given the prospect for steep increases in the amount taxpayers pay to subsidise new reactors, a wider discussion about nuclear costs is probably on the horizon. Speakers at a Conservative party conference fringe event in Birmingham agreed that, despite protestations from politicians to the contrary, support for nuclear does amount to a subsidy from the taxpayer. (3)

- (1) Guardian 17<sup>th</sup> Oct 2012 <http://www.guardian.co.uk/environment/2012/oct/17/energy-policy-coalition-green-agenda>
- (2) Energy Desk 16th Oct 2012 <http://www.greenpeace.org.uk/newsdesk/energy/analysis/dash-gas-risks-higher-costs-industry-and-consumers>
- (3) Carbon Brief 10th Oct 2012 <http://www.carbonbrief.org/blog/2012/10/how-much-would-an-expansion-of-nuclear-power-cost-us>