1.0 British Energy

1.1 British Energy (BE) said it was talking to more than 10 possible partners about building new reactors earlier this year, but when the Government began sounding trying to find a buyer for its 35.2% stake all that stopped. Buying such a stake would automatically trigger a takeover of the whole company. By June it was clear EDF was probably the only potential buyer, possibly with Centrica taking a minority stake.

1.2 Most of the press expected BE to accept a bid from EDF at the beginning of June, but this was rejected as being insufficient for a company providing at least 15% of the UK's electricity and with the best locations for new reactors. By mid-July an EDF takeover seemed to be on the cards again, and agreement appeared to have been reached, with Centrica taking a minority stake, but the deal collapsed unexpectedly on 1st August. BE’s board rejected the offer after two of the largest shareholders - fund management group Invesco Perpetual (15%) and insurer Prudential (7%) voted against.

1.3 The Government’s nuclear plans were thrown into chaos. The collapse of talks was a major embarrassment. A radical new plan will be needed to ensure new reactors are built. A higher EDF bid may be forthcoming and the Government is hopeful this preferred option can still be realised. There is also speculation that Centrica might revive its idea of all-shares merger with BE, but the Government appeared to pour cold water on this. The alternative is to go back to the idea of working with other companies on a site-by-site basis. It is unlikely to be short of offers: a number of companies, including Germany’s RWE, Spain’s Iberdrola and France’s Suez are all likely to be willing to take part.

1.4 Negotiations between EDF and BE were said to be continuing during August. But in the two weeks following the rejection of EDF’s offer, several commentators began to wonder if the BE Board hadn’t cut off

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3 FT 15th March 2008 http://www.ft.com/cms/s/0/1029181a-f1fb-11dc-9b45-0000779fd2ac.html
4 FT 19th June 2008 http://www.ft.com/cms/s/0/6c01b5e-3da8-11dd-bbb5-0000779fd2ac.html
5 Guardian 21 June 2008 http://www.guardian.co.uk/business/2008/jun/21/britishenergynuclearbusiness.utilities
7 Telegraph 16th July 2008 http://www.telegraph.co.uk/money/main.jhtml?xml=/money/2008/07/16/cnbe116.xml
its nose to spite its face. To begin with the price of oil started to fall. And then BE’s first-quarter profits were announced at just a third of last year's total mainly because two of the company's reactors have been out of service for much longer than expected, and other plants have also been plagued by outages. BE admitted the cost of bringing Hartlepool and Heysham 1 back on stream would be £115m rather than the original estimate of £50m. BE said it could not be sure of bringing the units back into service until the autumn.  

1.5 And EDF has a plan B which involves building on land it has bought itself and buying further sites from the NDA.  

1.6 One of the biggest problems with the sale of BE is that the Government has seemed confused about what it actually wants. It was happy to see Britain’s nuclear industry essentially sold to the French Government, but didn’t want a single owner of the best sites and made clear it would not tolerate a single monopoly player. It was unclear to what extent a successful bidder would be obliged to allow rivals to share nuclear sites— an issue with a crucially important bearing on the price of BE. Yet getting clear-cut answers is like trying to nail a blancmange to the wall.  

1.7 If the Government does sell its investment in BE, the proceeds would amount to around £4 billion which would go to the Nuclear Liabilities Fund (NLF) - a body created in 2004 to meet the huge costs of decommissioning. The NLF has already received more than £2bn, after the government sold some of its shares. But, in a highly controversial move, that money was lent back to the government by being put into the National Loans Fund. That’s a safe place to put the money, but the rate of interest paid is miserly - just over 5% at the moment - and there’s no opportunity for capital appreciation. So there’s zero chance of the money growing in value enough to make a serious dent in the future costs of decommissioning.  

1.8 The Government is entitled to 35 per cent of the free cash flow from BE following its bail-out of the company in 2002, and the cash is put into the NLF. But the NLF’s take will be much lower than last year, because of the sharp fall in profits.  

2.0 New Reactor Sites

2.1 Britain must build “at least” eight new nuclear power stations during the next 15 years according to Gordon Brown. The first new reactors should be approved over the next two years and could start feeding
electricity into the national grid by 2017. Some are likely to be built on sites that are already generating nuclear power, such as Hinkley, Sizewell, Bradwell, Hartlepool and Dungeness - but people in other areas could be faced with a nuclear plant on their doorsteps for the first time. The Department for Business insisted there was no pre-determined list of sites.

2.2 The on-off £12bn BE takeover saga is delaying plans by the NDA to launch a formal auction of some of its sites. It had planned to invite energy groups to table bids at the beginning of August when BE looked certain to accept a takeover by EdF. But the NDA will now have to wait until the ownership of BE is resolved, because this would affect who would bid for its own sites.

2.3 At least two major energy firms are vying to buy up land around Wylfa on Anglesey. EdF Energy and US company Energy Solutions are among those hoping to buy land near there. As Wylfa is owned by the NDA, the likelihood of a new reactor on Anglesey probably increased after the collapse of EdF’s BE bid. EdF wants to build up to four new reactors in the UK, and regards the Wylfa site as a “back-up plan” if it doesn’t buy BE.

2.4 On 22 July 2008, the Government issued a delayed consultation document on its Strategic Siting Assessment (SSA) process and criteria. The consultation will run until 11 November 2008. BERR is holding three consultation meetings in London, Bristol and Manchester in early September. Final criteria and invitations to nominate sites are expected to be issued at the beginning of 2009. Then in mid-2009 a list of nominated sites will be issued as part of a consultation on the National Policy Statement for new Nuclear Power. The finalised National Policy Statement will then be published at the beginning of 2010.

2.5 This is all designed to dovetail in with the Planning Bill for England and Wales. The Bill finished its third reading in the House of Commons in June, and will start its committee session in the House of Lords in October 2008. The Bill aims to establish a streamlined procedure for approving large infrastructure projects including power stations. Once the National Policy Statement is finalized it will establish the need for new reactors. The subsequent planning process will then only deal with site specific issues.

2.6 There is nothing in the draft siting criteria which would rule out building new reactors on land at high risk of flooding. Ministers have refused to rule out building reactors in areas vulnerable to rising sea levels, flash floods and burst river banks. Environmentally sensitive parts of the UK - areas of outstanding natural beauty or those that are home to rare wildlife - could also be used, according to draft guidance from the Department for Business.

2.7 Professor Andrew Blowers, former member of CoRWM, and now chair of Blackwater Against New Nuclear Group (BANNG) accuses the Government of choosing its sites first and then setting out criteria to justify its selection. A more detailed and critical examination will reveal just how preposterous it is to put new reactors and waste stores on sites, like Bradwell, with crumbling coastlines.

3.0 Generic Design Assessment

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28 Guardian 14th July 2008 http://www.guardian.co.uk/environment/2008/jul/14/nuclearpower.gordonbrown?gusrc=rss&feed=networkfront
29 Times 14th July 2008 http://www.timesonline.co.uk/tol/news/politics/article4327220.ece
30 Northern Echo 14th July 2008 http://www.thenorthernecho.co.uk/news/2394211.nuclear_power_station_fast_track_list_denied/
33 Western Mail 2nd August 2008 http://www.walesonline.co.uk/news/politics-news/2008/08/02/edf-setback-raises-nuclear-power-stakes-for-anglesey-91466-21452400/
36 http://www.no2nuclearpower.org.uk/articles/comment_080818.php
3.1 The nuclear regulators – the Health and Safety Executive (HSE) and Environment Agency - have been carrying out a new process, called ‘Generic Design Assessment’ (GDA), which looks at the safety, security and environmental implications of new reactor designs before an application is made to build that design at a particular site. In March 2008, the initial assessment of four reactor designs was completed. No shortfalls in any of the four designs were found. A series of reports on each design were published. Atomic Energy of Canada Ltd pulled its ACR-1000 design out of the process in April.

3.2 The GDA process is likely to take around 3.5 years from start to finish, taking us up to around the spring of 2011. At the end of the process the regulators will make statements setting out their conclusions about the acceptability of the designs. But skill shortages at the HSE could lead to delays. The HSE is charging firms £15m, which is non-refundable, to evaluate the initial proposals through GDA, before licences for specific sites are considered.

4.0 Funding Provision for Nuclear Decommissioning

4.1 A draft framework on how decommissioning and waste costs would be paid for was published in February 2008, and consultation closed on 16th May 2008. Companies must produce a detailed funded decommissioning programme before new reactors are approved. This will include a commitment to pay into a secure and independently managed fund to cover all the costs of decommissioning, clean up and disposing of the waste.

4.2 A Nuclear Liabilities Financing Assurance Board will be set up, under the Energy Bill 2008 to monitor these funds, and provide advice to the government on all aspects of the financial arrangements operators plan to put in place. The Bill has completed its report stage in the House of Lords and is expected to be completed after the 2008 summer recess. The arrangements will give nuclear operators a fixed price they are required to pay for waste and decommissioning, leaving the taxpayer with all of the risk.

4.3 Dieter Helm, Professor of Energy Policy at New College, Oxford says the system proposed effectively means utilities will pay for the State to absorb the risks of handling nuclear waste in exchange for payments into a fund: “It’s a fixed-price contract for the Government to take the waste. The Government absorbs the final-end risk”. Shetland Island Council launched a scathing attack on the proposals arguing that any funding risks should be borne by the operator, not the public. The Spectator said there is every risk that the public will end up footing the bill. The government has left open the possibility of subsidizing reactors, in ‘extreme circumstances’, knowing full well that such extreme circumstances almost always attend decommissioning and waste disposal.

4.4 Gordon Mackerron, former chair of CoRWM said the system proposed amounts to a hidden subsidy for new reactors. He attacked as “frankly not credible” government assurances new reactors would meet the full...
cost of waste management. Ministers have agreed to cap the liability of operators, yet we can only have a hazy idea what a waste repository will cost.  

4.5 Stephen Thomas of Greenwich University says claims by the government’s adviser Tim Stone this fixed price for disposal of waste was “absolutely not a subsidy” are not credible. And from past experience of the accuracy of nuclear cost estimates, it is one that could prove costly to taxpayers more than 100 years into the future when this waste is actually being disposed of.  

5.0 Justification Process  

5.1 In March 2008 the Government invited nuclear power companies to put forward new reactor designs for a justification decision, and BERR issued Guidance for companies wishing to apply. The Justification Process is part of an EU regulation that requires companies to show the benefits of using their reactor designs outweigh the potential health risks. The process is expected to take about 18 months to complete, taking us up to the middle of 2009.  

5.2 In response the Nuclear Industry Association submitted an application on behalf of those energy utilities that have expressed an interest in developing new reactors. BERR will be publishing a package of information, including the application, later in 2008 for comment, and will issue a draft decision document for consultation.  

6.0 Site Licence  

6.1 In order to construct and operate a nuclear power station in the UK, a nuclear site licence must be granted by the Health and Safety Executive (HSE). HSE anticipates that most potential reactor operators will use a design which has completed the GDA process before submitting a site licence application. On the assumption this is the case, the licensing process would be expected to take around one year. The Government expects potential operators of the first new reactors to apply for a site licence around the beginning of 2011, with approval granted in early 2012. This process can run concurrently with the planning process.  

6.2 The licence application must include, amongst other things: evidence showing that the reactor is ‘Justified’ as required by the Justification of Practices Involving Ionising Radiation Regulations 2004; evidence the site complies with UK Government siting policies (in other words it would have to be a site included on the list of potential sites in the National Policy Statement); a statement on the decommissioning arrangements; and a pre-construction safety report.  

7.0 Scotland
7.1 North Ayrshire councillors have voted to back a third nuclear power station at Hunterston. They voted almost two-to-one in favour of a motion which urges the Scottish Government to support to BE should they commit to a Hunterston C station.  

7.2 A long-running battle over whether to release childhood leukaemia statistics for the area around Chapelcross has been referred back to the Scottish Information Commissioner by the House of Lords. Commissioner Kevin Dunion must establish whether the information held can be “anonymised” sufficiently so that it does not include personal data and, if that is not possible, whether releasing the figures complies with data protection principles.  

7.3 The Chapelcross plant has been given formal permission to start the three-and-a-half-year defuelling of its four reactors. It is the latest step in the lengthy decommissioning process.  

7.4 People living near the Dounreay nuclear plant say they will fight plans for the waste dump close to their homes, despite the scheme winning the conditional backing of the Scottish Environment Protection Agency. Sepa says it supports proposals for a £110 million underground low-level radioactive waste store – the first of its type in Scotland – provided seven planning conditions are imposed to protect people and the environment.  

8.0 Nuclear Waste Management

8.1 As widely predicted the White Paper on Managing Radioactive Waste Safely invited Councils in England and Wales to consider hosting a nuclear waste dump in return for government investment in jobs, road improvements and health screening. Copeland council in Cumbria confirmed it was planning to put its name forward. David Smythe, emeritus professor of geophysics at the University of Glasgow, said the area around Sellafield had 'no suitable rocks' for nuclear storage. However, the British Geological Survey, which will assess all suggested sites, said that latest research suggested that 40 to 60 per cent of Britain was suitable to store reactor waste, including much of the area around Sellafield.  

8.2 The White Paper gives the NDA responsibility for implementing geological disposal and places a commitment on it to “set out its framework for public and stakeholder engagement and communication”. The resulting strategy must be agreed by government. The NDA has produced a consultation document which sets out proposed principles and a framework. Comment is invited by 30th November 2008.  

8.3 The American nuclear waste dump is going to cost taxpayers $32 billion more than first thought to open and operate. The total cost will be over $90 billion.  

9.0 Radioactive Waste Discharges

9.1 DEFRA has launched a consultation on its draft revised UK strategy for radioactive discharges 2006 - 2030. The revised strategy is an update on the 2001-2020 strategy issued in 2002 and supposed to show how...
the Government will implement the OSPAR Strategy for radioactive substances. The deadline for responses to this consultation is 30 September 2008.63

9.2 DEFRA has also issued a consultation on a draft Statutory Guidance to the Environment Agency on the regulation of radioactive discharges into the environment. The statutory guidance will be the vehicle through which the Environment Agency will implement the revised discharges strategy in England and Wales for 2006-2030. The deadline for this is also 30th September. See: http://www.defra.gov.uk/corporate/consult/rad-discharges-eaguidance/index.htm

9.3 DEFRA did hold a consultation on a proposed Statutory Guidance to the Environment Agency in 2002, but this was never finalised. The Scottish Government issued its finalized Statutory Guidance to the Scottish Environment Protection Agency (SEPA) on the UK Strategy of Radioactive Discharges in February this year.64

10.0 Nuclear Decommissioning Authority

10.1 The NDA has chosen its preferred bidder in the competition for a Parent Body Organisation (PBO) to run the Sellafield site licence company (incorporating Sellafield itself, Calder Hall, Capenhurst and Windscale) - Nuclear Management Partners (NMP) consortium, which comprises Ame, URS Washington Division and France's Areva. Detailed negotiations are now taking place over an initial £5bn, five-year deal. The contract could last 17 years, making it potentially the UK's biggest public procurement deal. NMP beat three other bidders; CH2MHill Nuclear Services; a consortium of Serco, Bechtel and Babcock & Wilcox; and Fluor in combination with Toshiba.65

10.2 The degree to which the NDA has bent over backwards to accommodate foreign companies taking over Sellafield beggars belief. The contract could be worth a staggering £22bn of taxpayers' money. But the NDA has waived the insurance indemnity, meaning that public money could be used to sort out any accidents on site. Taxpayers could pick up a tab for hundreds of millions of pounds in the event of an accident.66 Because every country has different laws setting out liability in the event of a nuclear accident, and the consortia bidding for the contract were almost all multi-national, the government agreed to waive UK rules that require companies to pay the first £140m of clean-up costs.67

10.3 So far there has been no news about the outcome of discussions Gordon Brown was reported to be planning with the Japanese Prime Minister about new Japanese reprocessing contracts for Sellafield.68 But Business minister, John Hutton, told a Labour party fundraising dinner in Copeland the, "UK-US nuclear renaissance" could mean new reprocessing deals.69

10.4 The UK’s stockpile of plutonium from nuclear power stations has risen to 108 tonnes, according to the British government’s latest submission to the International Atomic Energy Agency. The stockpile at the end of 2007 exceeded the previous year’s total by 1.1 tonnes, and is enough for 13,500 nuclear bombs. Most is stored at Sellafield in Cumbria.70

10.5 The plutonium should be ‘recycled’ to help secure Britain’s future energy supplies according to Copeland’s MP, Jamie Reed. He says it could power three new reactors for years to come.71 Britain has a

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65 Guardian 12th July 2008 http://www.guardian.co.uk/environment/2008/jul/12/nuclearpower.pollution
67 Observer 6th July 2008 http://www.guardian.co.uk/business/2008/jul/06/1
69 Whitehaven News 9th July 2008 http://www.whitehaven-news.co.uk/news/business/1.143781
71 Whitehaven News 16th July 2008 http://www.whitehaven-news.co.uk/news/1.204677
stockpile of plutonium and uranium that, if converted to fuel, could be worth nearly £160 billion and power three nuclear reactors for 60 years, according to Sellafield Ltd. The future of the stockpile will be decided by ministers over the next year, so the NDA has begun to consult on what to do with it.\(^7\) The closing date for submissions on the plutonium options study is 8\(^{th}\) October 2008.\(^3\)

10.6 The Sellafield MoX Plant (SMP), completed in 1997 at a cost of £470m, has so far only produced around 5 tonnes of MoX (plutonium) fuel, compared with the 120 tonnes it should be producing every year.\(^7\) According to The Times, if it was decided to convert the UK plutonium stockpile into MoX, a new fuel fabrication plant would be needed.

10.7 Because SMP’s throughput has been so bad, Sellafield has been sub-contracting orders to France and transporting plutonium by sea to Europe. But the MoX fuel business suffered yet another embarrassment after the French nuclear safety authorities spotted an alleged certification problem over the status of plutonium sent from Sellafield to France on May 21. As a result of the mistake, the UK Department of Transport has slapped a ban on any further plutonium movements from Sellafield until the issue is resolved.\(^5\)

10.8 The NDA has been accused of failing to get a grip on soaring costs. The cost of decommissioning nuclear power sites could rise “significantly” above the £73bn already estimated, according to the Public Accounts Committee. Costs for work over the next five years have already risen “steeply”. Uncertainty over costs far in the future is understandable, but “difficult to justify” for imminent work.\(^6\)

10.9 The credibility of the NDA was shaken even further after the estimated cost of cleaning up waste was raised by a further £10bn. The latest clean-up estimate from the NDA suggests the commonly accepted figure of £73bn should rise to £83bn.\(^7\)

10.10 At the end of July the Government sneaked out its internal audit of the NDA’s funding. (“Response to the Business and Enterprise Committee Funding the Nuclear Decommissioning Authority”) and follow up report (“NDA Budgetting Shortfall 2007-08: Lesson Learned”). These reports expose massive cost overruns, amateurish bureaucratic cock-ups and complete chaos within the NDA.\(^8\)

11.0 France & Finland

11.1 French president Nicolas Sarkozy has announced plans to build a second EPR in France. The EPR is the type of reactor EdF would like to build in the UK, but there are currently only two under construction around the world, one in Finland and one at Flamanville in Normandy.\(^7\) Both construction projects have been disastrous. Construction at Flamanville was recently halted due to chronic safety problems and in Finland costs have doubled to nearly €5 billion, the reactor has 1500 safety and quality deviations, and is two and a half years behind schedule.\(^8\)

11.2 With EdF still a possible buyer for BE, and French reactor builder Areva, part of the consortia which has won the contract to run Sellafield, a spate of accidents in France has caused particular concern in this country.\(^8\)

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\(^{7}\) Times 18\(^{th}\) August 2008 http://business.timesonline.co.uk/tol/business/industry_sectors/utilities/article4553489.ece
\(^{7}\) http://www.nda.gov.uk/stakeholders/newsletter/plut-options-study.cfm
\(^{7}\) Guardian 3\(^{rd}\) March 2008 http://www.guardian.co.uk/world/2008/mar/03/nuclear.energy
\(^{7}\) Whitehaven News 16\(^{th}\) July 2008 http://www.whitehaven-news.co.uk/news/business/1.204661
\(^{7}\) Guardian 10\(^{th}\) July 2008 http://www.guardian.co.uk/world/2008/jul/10/nuclear.nuclearpower
\(^{7}\) Guardian 18\(^{th}\) July 2008 http://www.guardian.co.uk/environment/2008/jul/18/nuclearpower.energy?gusrc=rss&feed=networkfront
\(^{7}\) Daily Express 3\(^{rd}\) July 2008 http://www.express.co.uk/posts/view/50949/France-to-build-nuclear-reactor
\(^{8}\) See http://www.no2nuclearpower.org.uk/reports/French_EPR.php
\(^{8}\) Guardian 26\(^{th}\) July 2008 http://www.guardian.co.uk/business/2008/jul/26/britishenergygroupbusiness.utilities
**Accident 1:** Approximately 30 cubic metres of liquid containing un-enriched uranium spilled from an overflowing reservoir at the Tricastin facility, into the ground and rivers. The waste treatment plant operator, is a subsidiary of Areva. The French government ordered an investigation into the water table around all of France’s 58 reactors.

**Accident 2:** A radioactive leak from a broken pipe at Areva’s Romans-sur-Isère nuclear fuel plant in the Drôme region of south-eastern France. Safety authorities say the broken pipe might have ruptured a number of years ago.

**Accident 3:** On the same day as the Romans-sur-Isère incident, 15 EdF workers were exposed to traces of radioactive elements at the Saint-Alban plant in the Alpine Isere region. This site has two EdF PWRs: Saint Alban 1 & 2.

**Accident 4:** Radioactive particles spewed from a pipe slightly contaminating 100 employees, again at Tricastin, but at one of the EdF nuclear reactors rather than the Areva uranium processing plant.

**Accident 5:** Areva discovered it has exceeded its monthly limit for radioactive carbon 14 emissions to the atmosphere at Tricastin. The company informed the Nuclear Safety Authority (ASN) which ordered it to suspend all its activities that generate the long-lived radionuclide until the end of 2008.

Greenpeace France filed two complaints against Areva after the first uranium leak, as well as older leaks that were later found on the same site.

11.3 A fire at the construction site of the Olkiluoto reactor in Finland, spread to two floors of the reactor building, before it was put out. The fire caused extensive damage. Major concreting operations, which could take months, will be needed to repair the damage.

11.4 Greenpeace obtained confidential documents which said there were no qualified personnel supervising the welding and the quality of the welding had not been verified at Olkiluoto. The Finnish nuclear safety authority, STUK, said it would launch an investigation.

11.5 The Finnish Broadcasting Company YLE has evidence showing that Olkiluoto construction workers have been coerced not to report nuclear safety violations. Supervision of the site has failed catastrophically, and workers are being intimidated to keep quiet. Finnish authorities have failed to intervene even though they are aware of the problems. Greenpeace has called for an immediate end to all construction work until an independent group of inspectors is brought in.

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84 Guardian 19th July 2008 http://www.guardian.co.uk/environment/2008/jul/19/pollution.france
85 BBC 24th July 2008 http://news.bbc.co.uk/1/hi/world/europe/7522712.stm
88 Times 7th August 2008 http://business.timesonline.co.uk/tol/business/industry_sectors/natural_resources/article447984.ece
91 Reuters 30th July 2008 http://uk.reuters.com/article/oilRpt/idUKL054089220080730
11.6 The construction company Bouygues, which has teamed up with Areva to build EPR reactors at Olkiluoto, and Flamanville, France, continues to violate basic safety procedures at both sites. The latest inspection by French safety authorities at Flamanville reveals continuing safety violations.93

### 12.0 Alternatives

12.1 If the government is serious about renewables and energy efficiency, Britain doesn’t need to build major new power stations, according to a new report by independent energy experts Poyry. If the UK achieves its commitment to meet EU renewable energy targets and its own ambitious energy efficiency action plan, then major new power stations (coal, gas or nuclear) would not be needed to meet electricity requirements up to at least 2020.94

12.2 Industries across the UK could generate as much electricity as 10 nuclear power stations and halve gas imports by installing or extending combined heat and power plants according to another report by Pöyry, commissioned by Greenpeace. Poyry found nine sites where CHP could be applied or extended. Two of these sites are in Scotland, one at Grangemouth and one near Peterhead.95

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95 Guardian website 19th June 2008
http://www.guardian.co.uk/environment/2008/jun/19/renewableenergy.energyefficiency
EnoughsEnough.org partnered with Greenpeace on a full-page ad in The Times on 20th June 2008
http://www.enoughsenough.org/nuclear.pdf