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1.0 British Energy

1.1 In February British Energy (BE) was talking to more than 10 possible partners about building new reactors.¹ Then in March the Government dropped its commitment to holding a minimum 29.9% stake in BE,² and leading energy suppliers were approached to sound out their interest in buying the Government's 35.2% share. Buying such a stake would automatically trigger a takeover of the whole company.³

1.2 BE cautioned that the discussions might not lead to a bid but shares jumped to 627p, valuing the group at £6.5bn. At one stage the shares touched 680p, the highest for 18 months.⁴ EDF and RWE were favourites to takeover the company, but Eon (Powergen), Iberdrola (Scottish Power), Swedish nuclear utility Vattenfall and French utility Suez were also mentioned. Interest was also shown by the last two British-owned utilities, Scottish and Southern and Centrica.

1.3 But nothing is ever simple in the nuclear sector. The Government seemed confused about what it actually wanted. It was happy to see Britain's nuclear industry foreign-owned, but didn't want a single owner of the best sites for new reactors.⁵ The Government made clear to potential bidders it would not tolerate a single monopoly player.⁶ BE could be forced either to sell certain sites, or at least agree co-siting with rivals. That obviously devalues the price that can be obtained for BE as a standalone nuclear monopoly.⁷ On the other hand Energy Minister, Malcolm Wicks, insisted the government will not intervene.⁸

1.4 Centrica held talks with EDF and RWE aimed at securing a "British-led solution" for the future of BE.⁹ At first these appeared to come to nothing.¹⁰ Hopes of a bidding war driving up the price gradually faded as companies pulled out.¹¹ As the 9th May deadline for detailed bids approached, the bid battle turned into a one horse race¹² when EDF emerged as the sole bidder and is believed to have offered closer to 600p than the 700p a share.¹³

¹ Herald 14th Feb 2008.

http://www.theherald.co.uk/business/news/display.var.2042893.0.British_Energy_surges_on_positive_reaction.php

² FT 7th March 2008 <http://www.ft.com/cms/s/0/87540e3e-ebd1-11dc-9493-0000779fd2ac.html>

³ FT 15th March 2008

<http://www.ft.com/cms/s/0/1029181a-f1fb-11dc-9b45-0000779fd2ac.html>

⁴ Telegraph 19th March 2008

<http://www.telegraph.co.uk/money/main.jhtml?xml=/money/2008/03/17/bcnbrit117.xml>

⁵ Times 22nd February 2008 http://business.timesonline.co.uk/tol/business/industry_sectors/utilities/article3412912.ece

⁶ Observer 23rd March 2008 <http://www.guardian.co.uk/business/2008/mar/23/britishenergygroupbusiness.nuclearpower>

⁷ Independent 2nd May 2008 <http://www.independent.co.uk/news/business/comment/jeremy-warner/jeremy-warners-outlook-british-energy-may-have-to-share-sites-819746.html>

⁸ Observer 22nd June 2008 <http://www.guardian.co.uk/business/2008/jun/22/britishenergygroupbusiness.utilities>

⁹ Sunday Telegraph 6th April 2008

<http://www.telegraph.co.uk/money/main.jhtml?view=DETAILS&grid=&xml=/money/2008/04/06/cncentrica106.xml>

Guardian 7th April 2008 <http://www.guardian.co.uk/business/2008/apr/07/britishenergygroupbusiness.centricabusiness>

¹⁰ Observer 13th April 2008 <http://www.guardian.co.uk/business/2008/apr/13/centricabusiness.nuclear>

¹¹ FT 1st May 2008. <http://www.ft.com/cms/s/0/b068ef72-1716-11dd-bbfc-0000779fd2ac.html>

¹² Telegraph 6th May 2008 <http://www.telegraph.co.uk/money/main.jhtml?xml=/money/2008/05/06/cnbe106.xml>

¹³ Guardian 10th May 2008 <http://www.guardian.co.uk/business/2008/may/10/britishenergygroupbusiness.nuclear>

1.5 Most of the Press expected the BE board to recommend acceptance of EdF's £10bn bid. The remaining rival bidders - RWE and Iberdrola, were thought to be unlikely to table a firm offer.¹⁴ Iberdrola finally admitted it wasn't interested, citing an "unreasonable" asking price. But in fact the EdF bid was rejected.¹⁵

1.6 BE appeared set to abandon its £11 billion auction and go back to the original plan and parcel the company's nuclear development sites into a series of joint ventures.¹⁶ *The Independent* called this a "*predictably shambolic conclusion*" to the auction process. The Government was still unclear about the extent to which a successful bidder would be obliged to allow rivals to build nuclear plants on the same sites as BE – an issue with a crucially important bearing on price. Yet getting clear-cut answers is like trying to nail a blancmange to the wall.¹⁷

1.7 Electricity Companies would be mad to go ahead with a takeover of BE, according to Professor Steve Thomas of Greenwich Business School in London. He believes that the bidders were in danger of buying at the top of the market. He said: "The prices are insane. It's based on an assumption that fossil fuel prices will stay high forever, but there could be a collapse in prices in a surprisingly short time."¹⁸

1.8 However, the contest for control of British Energy appeared to continue. The Financial Times reported on 19th June that it should be clear within a month whether EdF, which remains the only potential buyer with an offer on the table, is going to seal the deal or walk away.¹⁹ And the idea that Centrica might take a minority stake in BE, along with EdF was raised yet again.²⁰

1.9 EDF has, in fact, bought land adjacent to Hinkley in Somerset and Wylfa on the island of Anglesey, so it might well be possible for the company to build two new nuclear stations without buying BE, or any of BE's sites.²¹

2.0 Nuclear Siting

2.1 At a conference for global nuclear investors held in June, the Secretary of State for Business, John Hutton, presented the Government's action plan for enabling the construction new reactors. This included the creation of a new Office of Nuclear Development, within the Department for Business; the creation of a new Hutton-chaired Nuclear Development Forum, bringing together Government and the industry, to discuss key issues and maintain momentum as nuclear new build progresses; and he published the draft of a consultation document on criteria for deciding on the siting of new reactors (the Strategic Siting Assessment [SSA]), to be consulted upon shortly.²²

2.2 The SSA is the process for identifying and assessing potentially suitable sites. Third parties will be invited to nominate potential sites for assessment against the siting criteria developed and consulted on by Government. The consultation on draft SSA criteria was promised for March this year. But with the final document still not out in June, this indicates delays in the process. The criteria will be used to rule out areas

¹⁴ Observer 8th June 2008 <http://www.guardian.co.uk/business/2008/jun/08/britishenergygroupbusiness.utilities>

¹⁵ Guardian 10th June 2008 <http://www.guardian.co.uk/business/2008/jun/10/britishenergygroupbusiness.utilities>

¹⁶ Sunday Times 15th June 2008

http://business.timesonline.co.uk/tol/business/industry_sectors/utilities/article4138424.ece

¹⁷ Independent 10th May 2008

<http://www.independent.co.uk/news/business/comment/jeremy-warner/jeremy-warners-outlook-national-interest-lost-in-nuclear-bid-battle-825520.html>

¹⁸ Sunday Herald 11th May 2008

http://www.sundayherald.com/business/businessnews/display.var.2262533.0.warnings_that_british_energy_is_a_risky_proposition.php

¹⁹ FT 19th June 2008 <http://www.ft.com/cms/s/0/06c01b5e-3da8-11dd-bbb5-0000779fd2ac.html>

²⁰ Guardian 21 June 2008 <http://www.guardian.co.uk/business/2008/jun/21/britishenergygroupbusiness.utilities>

²¹ City AM 16th June 2008 <http://www.cityam.com/index.php?news=15524>

²² BERR Press Release 12th June 2008

<http://nds.coi.gov.uk/environment/fullDetail.asp?ReleaseID=370431&NewsAreaID=2>

Telegraph 13th June 2008 <http://www.telegraph.co.uk/money/main.jhtml?xml=/money/2008/06/13/cnnuclear113.xml>

of the country in which there are no suitable sites for new reactors and establish the framework for assessing the suitability of proposed sites.²³

2.3 The Department of Business Enterprise and Regulatory Reform (BERR) says it published the draft set of criteria to give an indication of the Government's current thinking in relation to the proposed SSA.²⁴ The details of the process described in the document take account of work undertaken to date as part of the Strategic Environmental Assessment, but may change between 12 June and subsequent publication.

2.4 Final criteria and invitations to nominate sites are expected to be issued at the beginning of 2009. In mid-2009 a list of nominated sites would be issued as part of a consultation on the National Policy Statement for new Nuclear Power.

2.5 Utilities have been offered a new range of potential sites to construct nuclear power stations by the Nuclear Decommissioning Authority (NDA). The NDA has 18 sites in the UK, including Sellafield and the Magnox sites.²⁵ Potential buyers were given four weeks to respond from 6th March.²⁶ Centrica, EDF and Areva were all reported to have expressed an interest in NDA sites. The NDA says it will select the three sites that had proven most popular among the potential buyers and then decide on the nature of a sale process.²⁷

2.6 EnergySolutions, the nuclear services company based in Salt Lake City, Utah, which is running the Magnox sites on behalf of the NDA, is working on a plan to build and operate a new nuclear reactor at Wylfa with Toshiba-Westinghouse, the Japanese-owner of the AP1000 reactor design. They have held talks with several European and British utilities companies about forming a separate new-build consortium to the one involving British Energy.²⁸ The consortium is also interested in building reactors at Oldbury and Bradwell,²⁹ and has offered to accelerate the UK's stalled nuclear clean-up programme - in return for being given the sites to build a new fleet of reactors.³⁰

2.7 E.ON denied³¹ reports in *The Times* that it is considering nominating two non-nuclear sites in Kent as potential locations for new reactors. The company is considering its oil-fired power station at the Isle of Grain, near Sheerness, and its coal-fired plant at Kingsnorth, near Ashford. If they are nominated DBERR would assess the sites and open a public consultation on a draft list next spring.³²

2.8 British Energy has held a series of public meetings around the country to explain its plans for new reactors. Sizewell, Hinkley, Bradwell, Dungeness, Heysham and Wylfa have all been mentioned as possible sites, with perhaps two reactors being built at Sizewell and Wylfa.

3.0 From Mad to Worse

²³ Modern Power Systems 17th January 2008

<http://www.modernpowersystems.com/story.asp?sectioncode=131&storyCode=2048395>

²⁴ Strategic Siting Assessment: Preview of Nominations and Assessment Processes, Draft Exclusionary and Discretionary Criteria and Indicative Timeline, BERR, June 2008

<http://www.berr.gov.uk/files/file46596.pdf>

²⁵ Sunday Times 2nd March 2008.

http://business.timesonline.co.uk/tol/business/industry_sectors/natural_resources/article3465259.ece

²⁶ BERR Press Release 6th March 2008 <http://nds.coi.gov.uk/Content/Detail.asp?ReleaseID=358129&NewsAreaID=2>

²⁷ Reuters 9th June 2008

<http://uk.reuters.com/article/mergersNews/idUKL095949920080609?rpc=401&&pageNumber=1&virtualBrandChannel=0>

²⁸ Times 14th April 2008 http://business.timesonline.co.uk/tol/business/industry_sectors/utilities/article3739257.ece

²⁹ Times 28th April 2008

http://business.timesonline.co.uk/tol/business/industry_sectors/utilities/article3827898.ece

³⁰ Observer 1st June 2008

<http://www.guardian.co.uk/business/2008/jun/01/utilities.britishenergygroupbusiness>

³¹ Kent News 20th May 2008 <http://www.kentnews.co.uk/kent-news/No-nuclear-plans-for-Hoo-Peninsula,-says-E-ON-newsinkent13069.aspx?news=local>

³² Times 20th May 2008 http://business.timesonline.co.uk/tol/business/industry_sectors/utilities/article3964832.ece

3.1 The UK's reliance on nuclear power will increase "significantly" over the next two decades, according to John Hutton. He says he expects a new generation of reactors to supply much more of the country's electricity than the current 19%³³ - perhaps 30% or more.³⁴ The government will pull out all the stops to maximise nuclear expansion. Hutton says he has been "very encouraged" by the response from investors. Hutton says the huge nuclear expansion power he is calling for could lead to a £20bn economic bonanza creating 100,000 new jobs and benefit the economy as much as North Sea oil. He says Britain should aim to become a world leader in the development of nuclear power technology.³⁵

3.2 FoE called claims that Britain must "significantly expand" nuclear power for the sake of national security and to combat climate change, misleading and dangerous. If the government put this level of commitment into genuine solutions we could lead the world, create thousands of jobs and meet our energy needs. Talk of an expanded programme is really pie in the sky considering the timescales and technical realities involved. It also leaves behind a deadly toxic legacy that will remain a threat for tens of thousands of years. "Throwing more money and resources at the nuclear white elephant is a dangerous and expensive distraction."³⁶

3.4 Gordon Brown called for 1,000 new nuclear power stations around the world to meet global energy needs. He said this idea was based on research by the IAEA which would see 30 reactors opening every year for the next 30 to 40 years.³⁷ This is similar to an MIT study which envisioned 1,000GW of nuclear capacity installed by 2050. This would mean:-

- 1 new reactor coming online somewhere in the world every 15 days between 2010 and 2050.
- Nuclear power would only account for 19.2% of world electricity compared with 16.3% in the year 2000, and carbon emissions would still be increasing.
- A new Yucca Mountain sized nuclear dump would need to be opened somewhere every three or four years.
- At least 4 core meltdown accidents likely by 2055 even assuming new reactors are safer than existing ones.
- An increase in global uranium enrichment capacity of around 120-165% (and probably an expansion of reprocessing). Just 1% of the enrichment capacity required would be enough to make 175 – 310 nuclear weapons every year.

4.0 Nuclear Finance

4.1 The estimate for a new nuclear power plant in Florida has tripled to \$17billion. The much vaunted "nuclear renaissance" in the US is showing signs of weakening, as the rising price erodes support.³⁸ The cost of building new reactors has more than doubled since 2000, according to Cambridge Energy Research Associates (Massachusetts) with a majority of the increase occurring since 2005.³⁹

4.2 The government claims that the private sector will meet the costs of new nuclear plants. But there is every risk that the public will end up footing the bill, says *The Spectator*. The government has left open the possibility of subsidizing reactors, despite its disclaimers. It says in 'extreme circumstances', it is prepared to help meet the massive decommissioning and waste disposal costs — knowing full well that such extreme circumstances almost always attend decommissioning and waste disposal.⁴⁰

³³ FT 6th March 2008

<http://www.ft.com/cms/s/0/209d689c-eafb-11dc-a5f4-0000779fd2ac.html>

³⁴ Times 3rd March 2008 http://business.timesonline.co.uk/tol/business/industry_sectors/utilities/article3471797.ece

³⁵ Guardian 26th March 2008 <http://www.guardian.co.uk/environment/2008/mar/26/nuclearpower.energy>

³⁶ FoE Press Release 26th March 2008

http://www.foe.co.uk/resource/press_releases/nuclear_power_a_dangerous_26032008.html

³⁷ Scotsman 13th June 2008 <http://news.scotsman.com/latestnews/Brown-World-needs-1000-more.4182560.jp>

³⁸ St Petersburg Times (Florida) 11th March 2008

http://www.sptimes.com/2008/03/11/news_pf/State/Nuke_plant_price_trip.shtml

³⁹ <http://www.cera.com/asp/cda/public1/news/pressReleases/pressReleaseDetails.aspx?CID=9505>

⁴⁰ Spectator 12th March 2008

http://www.spectator.co.uk/the-magazine/features/553546/part_3/go-nuclear-but-keep-your-hand-on-your-wallet.thtml

4.3 Companies building reactors in the UK will have to meet the full cost of their future closure and clean-up, setting money aside from day one, according to the government. Its draft framework on how the decommissioning of new nuclear reactors would be paid for was published in February. It will be a criminal offence not to comply with the approved arrangements and the Government is taking powers to guard against unforeseen shortfalls. Under the new guidance, 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. The government will appoint a number of experts from the nuclear, insurance and banking industries to sit on a Nuclear Liabilities Financing Assurance Board, which will monitor the companies decommissioning funds.⁴¹

4.4 The Government issued draft guidance for consultation on funding for decommissioning and waste management costs for new reactors in February. The consultation closed on 16th May 2008.⁴²

4.5 Gordon Mackerron, former chair of the Committee on Radioactive Waste Management said this system amounted to a hidden subsidy for new reactors. He attacked as “frankly not credible” government assurances that new reactors would meet the full cost of waste management. His concern centres on proposals to offer operators of nuclear reactors a fixed unit price for waste disposal. And Ministers have agreed to cap the liability of operators for decommissioning and clean up. Mackerron says we can only have a hazy idea at this stage what a waste repository will cost.⁴³

4.6 Stephen Thomas of Greenwich University says the Government is failing to adhere to the pledge not to subsidise the industry. Under the proposed new policy on waste, companies building reactors will be given a guaranteed fixed price for disposal of waste when they start construction. Claims by the government’s adviser Tim Stone that this fixed price 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.⁴⁴

4.7 Thomas says the first nuclear order is still five years away and companies cannot be held to promises made now that they can build plants without subsidy. The fear must be that if companies insist they will not proceed unless subsidies are offered, the government will be prompted to drop its refusal to give subsidies before abandoning its nuclear ambitions. Subsidies and guarantees required would probably include: a guarantee from either the vendor or the government of a fixed price for construction, so if the costs do overrun, they do not pay; loan guarantees so that if the companies go bankrupt the banks lending the money are still repaid; and some guarantee on the price paid for the power produced so that if the electricity wholesale price collapses, as it did in 2002, the company is protected.

4.6 Nuclear Economist, Ian Jackson, says that foreign utility companies with reprocessing contracts with Sellafield appear to be paying a levelised unit disposal cost of some £201,000/m³ for intermediate-level waste. Commercially speaking it would be hard to justify charging British utilities a lower price for geological disposal and would risk accusations of illegal state aid, in contravention of European competition law. Assuming ten new reactors are built and that British utilities pay the same, then the price of waste disposal for a new build programme would be around £8.2 billion. The problem is this fully commercial price would make disposal far too expensive, killing the prospects of any new reactors. The £820 million per reactor is equivalent to 41% of each reactor’s expected £2 billion capital cost. Business models for nuclear generation assume costs of only 5% for waste management and decommissioning.⁴⁵

⁴¹ FT 22nd February 2008 <http://www.ft.com/cms/s/0/70bd3824-e0d4-11dc-b0d7-0000779fd2ac.html>

⁴² Consultation on Funded Decommissioning Programme Guidance for New Nuclear Power Station, BERR, February 2008 <http://www.berr.gov.uk/files/file44486.pdf>

Telegraph 22nd February 2008 <http://www.telegraph.co.uk/earth/main.jhtml?xml=/earth/2008/02/22/eanuc122.xml>

⁴³ FT 11th June 2008 http://www.ft.com/cms/s/0/4c7e0c5c-370c-11dd-bc1c-0000779fd2ac.html%3Fnclick_check%3D1
Gordon Mackerron’s response to the Government Consultation is available here:

http://www.sussex.ac.uk/sussexenergygroup/documents/decom_funding_consultation_gm.pdf

⁴⁴ Guardian 12th June 2008 <http://www.guardian.co.uk/commentisfree/2008/jun/12/nuclearpower.nuclear>

⁴⁵ Buried Costs, by Ian Jackson, Nuclear Engineering International, 27th March 2008.

4.7 The bottom line, says Jackson, is that nuclear energy utilities probably need fixed waste disposal 'prices' for repository disposal capped somewhere in the range from £12,200 to £24,400/m³, but the NDA's true marginal 'cost' is nearer to £67,000/m³, and the commercial 'value' of the repository asset could approach £201,000m³ if operated as a fully private sector venture. In other words, new reactors will not be built unless the government fixes the market.⁴⁶

4.8 Shetland Island Council launched a scathing attack on the government's proposal, expressing "serious misgivings" over plans for a new generation of nuclear reactors.⁴⁷ In their response to the consultation on decommissioning new reactors and managing radioactive waste, the council argues that any funding risks should be borne by the operator, not the public.

4.9 The Government has vastly underestimated the cost of building a new generation of reactors, according to Wulf Bernotat, chairman and chief executive of Eon. He says the cost per plant could be as high as €6 billion (£4.8 billion) - nearly double the Government's latest £2.8 billion estimate. His figures indicate that the cost of replacing Britain's ten nuclear power stations could reach £48 billion, excluding the cost of decommissioning ageing reactors or dealing with nuclear waste.⁴⁸

4.10 Friends of the Earth have published a report called "Voodoo Economics and the Doomed Nuclear Renaissance" by former Guardian Environment Correspondent, Paul Brown. Brown says "the government is trying to dupe the public into believing [the huge cost overruns] won't happen next time, although all the evidence is to the contrary. Even after years of reporting this industry I was shocked when doing this research at the scale of the technical failures and financial disasters facing the current nuclear industry - the costs of which will all fall on the taxpayer". The report concludes it won't be possible to build a new generation of nuclear power stations without pledging large sums of taxpayers money and extending unlimited guarantees to underwrite the debts of the existing and future nuclear industry.⁴⁹

5.0 Generic Design Assessment

5.1 The first stage of the Generic Design Assessment has been completed. No shortfalls in any of the four designs were found. A series of reports on each design have been published.⁵⁰ The GDA process is likely to take around 3.5 years from start to finish at the end of which the regulators will make statements setting out their conclusions about the acceptability of the designs.⁵¹

5.2 The next stage was going to be a prioritisation process to select a maximum of three reactor designs to proceed to the next stage of the assessment, but Atomic Energy of Canada Ltd announced in April it was pulling its ACR-1000 design out of the process to focus its energy on capturing business at home in Canada. Critics said it was trying to soften the blow of having the reactor excluded when the list was whittled down to three.⁵²

5.3 The NII is reported to be talking with its US and French counterparts to speed up the process and avoid replicating work.⁵³ The NII has warned again of likely delays in because of a shortage of skilled engineers. Delays in receiving documentation from various parties and the difficulties of talking to overseas regulators

<http://www.neimagazine.com/story.asp?storyCode=2049209>

⁴⁶ Greenpeace 27th March 2008 <http://www.greenpeace.org.uk/media/press-releases/taxpayers-facing-nuclear-missile>

⁴⁷ <http://www.shetland.gov.uk/news-advice/documents/NuclearWaste-Background1.doc>

⁴⁸ Times 5th May 2008 http://business.timesonline.co.uk/tol/business/industry_sectors/utilities/article3872870.ece

⁴⁹ Voodoo Economics and the Doomed Nuclear Renaissance by Paul Brown, FoE May 2008

http://www.foe.co.uk/shop/index.php?main_page=product_book_info&cPath=1_2&products_id=342

⁵⁰ The Design Assessment Reports can be viewed at <http://www.hse.gov.uk/newreactors/>

Builder and Engineer 18th March 2008

<http://www.builderandengineer.co.uk/news/environment/designs-for-nuclear-stations-clear-first-hurdle-1736.html>

⁵¹ HSE Press Release 18th March 2008 <http://nds.coi.gov.uk/Content/Detail.asp?ReleaseID=361424&NewsAreaID=2>

⁵² Toronto Star 5th April <http://www.thestar.com/Business/article/410418>

⁵³ Independent on Sunday 8th June 2008

<http://www.independent.co.uk/news/business/news/foreigners-to-speed-up-uk-nuclear-build-842310.html>

and receiving final reactor designs are referred to in a letter from Mike Weightman, chief inspector at the NII, to the Department for Business Enterprise and Regulatory Reform.⁵⁴

6.0 Justification

6.1 The Government has invited nuclear power companies to put forward new designs for a justification decision for nuclear reactors. The Justification Process is part of European Union regulation that requires the assessment of each design before it can be used in the UK. Companies hoping to build new reactors must show the benefits of using their reactor designs outweigh the potential health risks. The Government said it wanted applications before the beginning of June. The process is expected to take about 18 months to complete and will run in parallel with the Generic Design Assessment.⁵⁵

6.2 At the same time as consulting on the Future of Nuclear Power, beginning in May 2007, the Government also consulted on the processes for Justification and the Strategic Siting Assessment.⁵⁶ Then in March 2008 BERR issued Guidance for companies wishing to apply for a justification decision on new reactors.⁵⁷ DEFRA also published an updated guide to the administration of the justification process in May 2008.⁵⁸

7.0 Nuclear Power is Not the Answer

7.1 Friends of the Earth told the government to come up with a plan to tackle fuel poverty by the end of February or face a judicial review, just as the government proposed cutting the funding for the National Energy Action – the fuel poverty charity - by a quarter. It is estimated more than 4.5 million households now suffer from fuel poverty, the highest since Labour has been in power, and the number will be rising because of increasing utility bills. The government committed itself to the legally binding target of eradicating fuel poverty among vulnerable households in England by 2010, and across the UK entirely by 2016. Last year, the government also cut spending on its Warm Front programme, which provides grants to insulate the homes of people on lower incomes, by nearly a quarter for the next three years, compared with 2007-08.⁵⁹

7.2 In April FoE joined forces with Help the Aged and filed for a judicial review at the high court. The government's own advisers, the Fuel Poverty Advisory Group (FPAG), warned that the government would miss its target to eradicate fuel poverty for the most vulnerable households by 2010, and for all households by 2016.⁶⁰

7.3 One of the loudest arguments of those who profess that nuclear power is needed even if renewables markets grow large is that renewables cannot meet baseload demand. Late last year, a German economics ministry experiment showed that distributed power can indeed produce reliable baseload in a secure and reliable manner. Thirty-six decentralised renewable plants - a mix of biogas, wind, solar (photovoltaics, or PV) and hydropower - were linked by three companies and a university in a nationwide network controlled by a central computer. The system met both continuous baseload and peakloads round the clock and regardless of weather conditions.⁶¹

7.4 Industries across the UK could generate as much electricity as 10 nuclear power stations and halve gas imports by installing or extending plants that generate energy while using the waste heat to warm local

⁵⁴ Guardian 23rd June 2008

<http://www.guardian.co.uk/world/2008/jun/23/nuclear.greenpolitics>

⁵⁵ Forbes 31st March 2008 <http://www.forbes.com/markets/feeds/afx/2008/03/31/afx4833538.html>

Reuters 31st March 2008

<http://uk.reuters.com/article/domesticNews/idUKL314396220080331?rpc=401&feedType=RSS&feedName=domesticNews&rpc=401>

⁵⁶ <http://www.berr.gov.uk/files/file39199.pdf>

⁵⁷ <http://www.berr.gov.uk/files/file45384.pdf>

⁵⁸ <http://www.defra.gov.uk/environment/radioactivity/government/legislation/pdf/justification-guidance.pdf>

⁵⁹ Observer 24th February 2008 <http://www.guardian.co.uk/business/2008/feb/24/greenbusiness>

⁶⁰ Guardian 9th April 2008 <http://www.guardian.co.uk/business/2008/apr/09/energy.oil>

⁶¹ Guardian 26th Feb 2008 <http://www.guardian.co.uk/commentisfree/2008/feb/26/renewedenergy>

buildings. A report by Pöyry Energy Consulting, commissioned by Greenpeace, analysing the UK's potential for combined heat and power units – which capture the heat from the electricity generation process and recycle it – found nine sites where CHP could be applied or extended. The energy produced could be almost tripled. Currently 5.5GW of electricity is produced by CHP plants, but the new report suggests there could be up to 16GW more, the equivalent of 8 nuclear power stations.⁶²

7.5 The Renewables Advisory Board has reported that the UK could generate 14% of its total energy (not just electricity) from renewables by 2020 if a set of identified radical policy changes are put into effect quickly.⁶³ The Government launch a consultation on renewable energy on 26th June which FoE described as a welcome sign that Ministers' thinking on green energy is moving out of the slow lane. The consultation explores how the UK can meet European targets for generating 15 percent of energy from renewable sources by 2020 and recognises for the first time that kick-starting a renewable energy revolution will require change across a wide range of policy areas.⁶⁴

7.6 Professor David Elliott from the Open University pointed out there could be a conflict between the government's parallel commitments to greatly expanded nuclear power, and its renewable energy plans. UK "baseload" is about 20 gigawatts (GW), nearly a quarter of total UK generating capacity - this is kept available at all times and supplies all the electricity required at periods of low demand, like at night. It is currently proposed that we build perhaps 20GW of new nuclear plant and 30GW of offshore wind capacity. Nuclear plants can't easily vary their power output to follow changing consumer demand patterns and are, in any case, usually kept running at full power in order to pay for their significant capital costs. At periods of low demand it would seem therefore that, in the absence of major electricity storage facilities, if wind is available it would not actually be used. Put simply, for much of the time, big renewables and big nuclear would be incompatible.⁶⁵

8.0 France & Finland

8.1 Nuclear reactors of the kind France wants to sell to Britain suffer from "potentially catastrophic" problems, it was claimed, after a letter from France's nuclear safety watchdog, ASN, was leaked on a website highlighting weaknesses that could undermine the £2.8billion project. Pointing out "numerous malfunctions" in the building of the reactor at Flamanville, it calls for them to be corrected in a month. These include weaknesses in steel grids reinforcing the concrete base supporting the reactor. Such damage could lead to nuclear accidents, threatening the population of northern France, the Isle of Wight and possibly the coast of England.⁶⁶

8.2 German engineering group Siemens expects a "not insignificant" financial impact from delays in completing a nuclear power plant in Finland. French nuclear group Areva and Siemens are building the 1,600 megawatt Olkiluoto 3 reactor. Analysts estimate delays could lead to 700 million euros to 1.5 billion

⁶² Guardian website 19th June 2008

<http://www.guardian.co.uk/environment/2008/jun/19/renewableenergy.energyefficiency>

Securing Power: Poyry report for Greenpeace: Summary.

http://www.greenpeace.org.uk/files/pdfs/climate/industrialCHP_summary.pdf

Enoughsenough.org partnered with Greenpeace on a full-page ad in The Times on 20th June 2008

<http://www.enoughsenough.org/nuclear.pdf>

⁶³ Business Green 18th June 2008

<http://www.businessgreen.com/business-green/news/2219342/policy-overhaul-needed-meet-eu>

2020 Vision: How the UK can meet its target of 15% renewable energy. Renewables Advisory Board, June 2008.

<http://www.renewables-advisory-board.org.uk/vBulletin/showthread.php?t=136>

⁶⁴ BERR 26th June 2008 <http://www.berr.gov.uk/energy/sources/renewables/strategy/page43356.html>

⁶⁵ Guardian 28th June 2008

<http://www.guardian.co.uk/environment/2008/jun/28/renewableenergy>

⁶⁶ Telegraph 31st March 2008

<http://www.telegraph.co.uk/news/worldnews/1583414/Safety-fears-over-French-nuclear-technology.html>

Independent on Sunday 13th April 2008 <http://www.independent.co.uk/news/uk/home-news/defects-found-in-nuclear-reactor-the-french-want-to-build-in-britain-808461.html>

euros in additional costs. The start-up of the reactor was originally scheduled for 2009 but has been pushed back to mid-2011.⁶⁷

9.0 Miscellaneous

9.0 Ireland will demand greater access to inspect Britain's nuclear facilities if new reactors are built, says John Gormley, Ireland's Minister of the Environment.⁶⁸

9.1 The Food Standards Agency has published three reports on the monitoring of sheep at farms remaining under post-Chernobyl restrictions. There are still 369 under restriction in Cumbria, Scotland and Wales - the areas covered by the three reports.⁶⁹

10.0 Nuclear Waste Management Recent Developments

10.1 New high-efficiency nuclear fuel meant to burn longer and stronger may prove unstable in an emergency and hard to dispose of. By further enriching the uranium used to power nuclear reactors, operators can extract more electricity from a given amount of fuel. However, this type of spent fuel will be far more radioactive than existing waste and may even require a second repository.⁷⁰

10.2 The Lake District National Park Authority says it will “work with partners” on any proposed underground nuclear waste repository. The national park’s new Mineral and Waste core strategy states that “the likelihood of West Cumbria being put forward as a potential volunteer community is very high.”⁷¹ Martin Forwood of CORE called this a major U-turn by the authority. While there are indeed many prepared to sell out West Cumbria in return for some package of Government sweeteners, the well-documented unsuitability of the local geology will inevitably pull the plug on such hopes.⁷²

10.3 As widely predicted Councils in England and Wales have been asked to consider hosting a nuclear waste dump in deep underground vaults 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, a move seen as inevitable because most of the temporary waste is stored at the Sellafield reprocessing plant and the industry accounts for more than half of jobs in the area. 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.⁷³

10.4 The Government ‘incentives’ promised were widely reported as “bribes” to accept nuclear waste. Hilary Benn, the Environment Secretary, urged councils and other groups to provide an “essential service to the nation” by offering sites to bury a share of Britain’s stockpile of radioactive material.⁷⁴

⁶⁷ Reuters 31st March 2008 <http://uk.reuters.com/article/oilRpt/idUKL3132855120080331>

⁶⁸ Observer 17th Feb 2008 <http://www.guardian.co.uk/world/2008/feb/17/ireland.nuclearpower>

⁶⁹ Food Standards Agency 27th June 2008

<http://www.food.gov.uk/news/newsarchive/2008/jun/chernobyl>

⁷⁰ Too Hot to Handle, by Hugh Richards, April 2008 <http://www.no2nuclearpower.org.uk/reports/TooHottoHandle.pdf>

New Scientist 9th April 2008 <http://www.rob Edwards.com/2008/04/nuclear-super-f.html>

⁷¹ Whitehaven News 23rd April 2008 <http://www.whitehaven-news.co.uk/news/business/1.92841>

⁷² Whitehaven News 8th May 2008 http://www.whitehaven-news.co.uk/opinion/you_say/1.101556

⁷³ Observer 8th June 2008. <http://www.guardian.co.uk/environment/2008/jun/08/nuclearpower.waste>

⁷⁴ Telegraph 12th June 2008

<http://www.telegraph.co.uk/earth/main.jhtml?xml=/earth/2008/06/12/eanuclear212.xml>

10.5 Councillor Tony Markley, Cumbria County Council's cabinet member responsible for nuclear issues, said: "The message from Cumbria is 'we're listening'. This White Paper starts a process which will allow Government to have a meaningful dialogue with communities who may wish to explore the possibility of hosting a deep geological nuclear storage facility."⁷⁵ Copeland Borough Council agreed to open talks with the government about the area's potential for a repository. Council leader Elaine Woodburn said: "It is simply an expression of interest, completely without commitment, it is not saying we want a repository. "At the end of the day that will be up to the people of Copeland."⁷⁶ Cumbria also took the first steps towards volunteering when the council decided to start talks about the implications of the deal with two local borough councils: Copeland, which has already made an "expression of interest" in hosting the dump, and Allerdale, which is expected to follow suit.⁷⁷

10.6 *The Guardian* recommended that anyone tempted by the bribes (up to £1bn) immediately contacts the newly formed Nuclear Waste Advisory Associates. This body, made up of researchers, academics and two former government advisers from the Committee on Radioactive Waste Management, promises to give dispassionate, independent, objective advice - a rarity in the fractious debate. For more information, go to www.nuclearwasteadvisory.co.uk

11.0 Radioactive Waste Discharges

11.1 The Scottish Government finally issued its Statutory Guidance to the Scottish Environment Protection Agency (SEPA) on the UK Strategy of Radioactive Discharges. This document provides guidance to SEPA on the contribution it should make towards achieving the requirements of the UK Strategy for Radioactive Discharges. This guidance is necessary because the UK Government agreed, under the OSPAR Treaty signed in 1998 to achieve "substantial reductions or elimination of discharges, emissions and losses of radioactive substances" by 2000 and by the year 2020, "to levels where the additional concentrations in the marine environment above historic levels, resulting from such discharges, emissions and losses, are close to zero".⁷⁸

11.2 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 demonstrates how the Government will continue to implement the OSPAR Strategy for radioactive substances. The deadline for responses to this consultation is 30 September 2008. See <http://www.defra.gov.uk/corporate/consult/rad-discharges-ukstrategy/index.htm>

11.3 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>

11.4 The Environment Agency has launched a consultation on Radioactive Substances Regulation Environmental Principles (REPs) and Assessment of Best Available Techniques (BAT), also with a closing date of 30th September. See: http://www.environment-agency.gov.uk/yourenv/consultations/2066484/?version=1&lang=_e

12.0 Low Level Waste

⁷⁵ Whitehaven News 12th June 2008 http://www.whitehaven-news.co.uk/news/responses_to_nuclear_white_paper

⁷⁶ Whitehaven News 25th June 2008 <http://www.whitehaven-news.co.uk/news/1.130021>

⁷⁷ Independent on Sunday 29th June 2008

<http://www.independent.co.uk/environment/green-living/what-happened-next-to-cumbrias-nuclear-dump-bribe-856581.html>

⁷⁸ UK Radioactive Discharges Strategy, Guidance to SEPA, February 2008.
<http://www.scotland.gov.uk/Resource/Doc/211215/0055804.pdf>

12.1 Studsvik UK was granted a nuclear site licence by the Health and Safety Executive in February for its proposed plant near Workington which will decontaminate low-level radioactive metal from the nuclear industry and sell it on to be reused.⁷⁹ Construction work began on the £6m metal recycling plant in April. It is expected to open in December.⁸⁰

12.2 UK Nuclear Waste Management Ltd (UKNWM), a joint venture between URS Corp (formerly Washington Group International) AREVA, Studsvik UK and Serco Assurance, has signed a contract with the NDA for the management and operation of a nuclear waste repository at Drigg near Sellafield. The contract is worth between 200 million pounds and 500 million pounds. The initial contract is valid for five years, with a potential extension up to 17 years depending on performance and NDA approval.⁸¹

12.3 An unprecedented plan to export radioactive waste from old nuclear submarines in Scotland to Sweden is coming under fire from local authorities worried about accidents and pollution. The naval dockyard at Rosyth in Fife has applied for permission to ship metal contaminated with radioactivity to a smelter near Nykping in Sweden, run by the nuclear waste company Studsvik. The plan is for the metal, from the decommissioning of seven defunct submarines laid up at Rosyth, to be melted, decontaminated and reused. The contaminated slag will then be sent back to Rosyth to be disposed of at the low-level radioactive waste dump at Drigg, near Sellafield in Cumbria.⁸²

12.4 Dounreay's amended planning application for a low level waste site near the village of Buldoo will be fiercely opposed by the villagers.⁸³ The NDA has been accused of paying "sweeteners" to two tenants of land adjoining the proposed LLW waste site.⁸⁴

13.0 Nuclear Decommissioning Authority

13.1 Stephen Henwood has been appointed as the new Chair of the Nuclear Decommissioning Authority (NDA). He was Group Managing Director of International Partnerships, BAE Systems until 2006.⁸⁵

13.2 The Environment Agency believes insufficient funds have been made available by ministers for the clean-up of some sites, and the NDA is accused of making things worse by deciding to concentrate on especially toxic waste at sites such as Sellafield. This prioritisation will delay clean-up elsewhere, "prolonging and potentially increasing risk to the environment that they pose and the costs necessary for their maintenance", the Environment Agency argues in a strongly worded response to the NDA's draft business plan covering the years 2008-11.⁸⁶

13.3 The NDA was accused by MPs on the House of Commons Public Accounts Committee of letting its budget soar "out of control" but it fought back saying it was bringing modern management methods to bear on an issue over which the country had for 50 years "looked the other way". Edward Leigh, committee chairman, said the £73bn figure for the cost of cleaning up Britain's old power stations and nuclear facilities was only the latest in a long line of continually escalating numbers. NDA chief executive Ian Roxburgh insisted that bringing in private clean-up contractors through planned competitive tendering would pay

⁷⁹ Whitehaven News 19th February 2008 <http://www.whitehaven-news.co.uk/1.35034>

⁸⁰ Whitehaven News 25th April 2008 <http://www.whitehaven-news.co.uk/1.94416>

⁸¹ Forbes 31st March 2008 <http://www.forbes.com/afxnews/limited/feeds/afx/2008/03/31/afx4832299.html>

⁸² Sunday Herald 15th June 2008

<http://www.robedwards.com/2008/06/protest-over-plan-to-send-nuclear-waste-to-sweden.html>

Dundee Courier 23 June 2008 <http://www.thecourier.co.uk/output/2008/06/23/newsstory11543872t0.asp>

⁸³ Aberdeen Press & Journal 16th June 2008

<http://www.pressandjournal.co.uk/Article.aspx/691704?UserKey=0>

⁸⁴ John O Groat 20th June 2008

[http://www.johnogroat-](http://www.johnogroat-journal.co.uk/news/fullstory.php/aid/4770/Dounreay_'sweetener'_claim_to_be_investigated.html)

[journal.co.uk/news/fullstory.php/aid/4770/Dounreay_'sweetener'_claim_to_be_investigated.html](http://www.johnogroat-journal.co.uk/news/fullstory.php/aid/4770/Dounreay_'sweetener'_claim_to_be_investigated.html)

⁸⁵ BERR Press Release 20th Feb 2008

<http://nds.coi.gov.uk/environment/fullDetail.asp?ReleaseID=353890&NewsAreaID=2>

⁸⁶ Guardian 25th Feb 2008 <http://www.guardian.co.uk/environment/2008/feb/25/nuclearpower.greenpolitics>

dividends. The more that was learned about the scale and type of waste the easier it would be to make estimates, he said, but he admitted costs were likely to rise.⁸⁷

13.4 The NDA had to ask the Department for Business for £400 million to bolster its budget in March.⁸⁸ This led to an investigation by the House of Commons Business and Enterprise Committee. Chairman Peter Luff likened the NDA to a "car crash waiting to happen" MPs questioned Bill Roberts, the NDA's Director of finance and resources; alongside officials from BERR. The NDA informed the Committee a big factor in the call for extra cash was an extra £143 million income shortfall caused by plant failures and less production than had been expected, primarily at the Thorp and SMP.⁸⁹

13.5 The Business and Enterprise Committee concluded that funding for the NDA will almost certainly have to increase "significantly" over the coming years. The Committee called into question the sustainability of the NDA's financing model, warning of difficulties because of the "volatility and uncertainty" of the group's commercial income.⁹⁰ Ministers pledged to review how the £73bn liability will be funded, after the Committee's warning.⁹¹

13.6 A consortium, including US engineering giant Bechtel and the UK's Serco, is the frontrunner for the £20bn contract to decommission the Sellafield nuclear site in Cumbria. The deadline to lodge final bids with the NDA was 7 April. The NDA insists the multibillion pound competition remains on track, despite losing five of its 18 directors in the past two months. The Government wants the contract awarded by September. The Authority has been testing the four consortia who tabled bids. The team led by Bechtel is understood to have performed the best so far. The consortium made up of US firm Washington Group, the UK's Amec and French firm Areva is thought to have fallen behind. A consortium of Fluor and Toshiba, and CH2M Hill of the US, are the other two bidders.⁹²

13.7 Three years to the month after being shutdown due to a serious leak of radioactive liquor, Thorp is finally up and running again. The reprocessing plant was gearing up for a re-start in January only for a vital piece of machinery to fail.⁹³

13.8 The NDA has appealed for help in dealing with the UK's 100-tonne stockpile of plutonium, and in deciding whether to treat it as waste or reuse it as fuel for nuclear reactors. One option being considered is for the plutonium to be used to make MoX fuel for a new nuclear reactor at Sellafield. But the question of whether the plutonium should be used or disposed of could reopen the debate on nuclear reprocessing and whether spent fuel from the next generation of nuclear reactors should be reused.⁹⁴ Areva says it is talking to the NDA about what to do with the UK's plutonium stockpile, and wants permission to build a new MOX plant at Sellafield.⁹⁵

14.0 Nuclear Renaissance and Proliferation

14.1 At least 40 developing countries have signaled an interest in starting nuclear power programmes. Proliferation experts have questioned the peaceful intention of some of these and say new reactors could provide the building blocks for nuclear arsenals. At least half a dozen countries have also said in the past four years that they are specifically planning to conduct enrichment or reprocessing of nuclear fuel, a

⁸⁷ Guardian 26th Feb 2008 <http://www.guardian.co.uk/world/2008/feb/26/nuclear.nuclearpower>

⁸⁸ Times 5th March 2008 http://business.timesonline.co.uk/tol/business/industry_sectors/article3486304.ece

⁸⁹ Whitehaven News 19th March 2008 <http://www.whitehaven-news.co.uk/home/1.57901>

⁹⁰ Guardian 7th April 2008

<http://www.guardian.co.uk/environment/2008/apr/07/nuclearpower.energy?gusrc=rss&feed=uknews>

⁹¹ FT 7th April 2008

<http://www.ft.com/cms/s/0/c8e2c82e-0420-11dd-b28b-000077b07658.html>

⁹² Observer 9th March 2008 <http://www.guardian.co.uk/business/2008/mar/09/utilities1>

Telegraph 9th March 2008

<http://www.telegraph.co.uk/money/main.jhtml?view=DETAILS&grid=&xml=/money/2008/03/09/cnnda109.xml>

Guardian 12th March 2008 <http://www.guardian.co.uk/environment/2008/mar/12/nuclearpower.nuclear>

⁹³ Whitehaven News 19th March 2008 <http://www.whitehaven-news.co.uk/home/1.57998>

⁹⁴ FT 2nd April 2008 <http://www.ft.com/cms/s/0/6242454a-004c-11dd-825a-000077b07658.html>

⁹⁵ FT 9th June 2008 <http://www.ft.com/cms/s/0/a957260e-35bb-11dd-998d-0000779fd2ac.html>

prospect that could dramatically expand the global supply of weapons-useable plutonium and enriched uranium.⁹⁶

14.2 Thirteen of the 40 countries are in the greater Middle East, and some appear to be moving down the nuclear path in reaction to the Iran's pursuit of technologies that appear designed to provide a nuclear weapons capability.⁹⁷ While these new nuclear aspirants have not talked even privately about seeking nuclear weapons they probably want the infrastructure to provide a counterbalance to Iran, both laying the ground for a possible future security hedge, and bestowing national prestige in the context of historic rivalries.⁹⁸

14.3 The UK Government has joined the U.S.-sponsored Global Nuclear Energy Partnership (GNEP)⁹⁹ launched in 2006 by the Bush administration to expand the international nuclear industry and forge partnerships with other countries to address fuel supply, spent nuclear fuel and proliferation of nuclear weapons. The Partnership was rubbished as unworkable by the US National Academy of Sciences just a few months ago.¹⁰⁰ Under GNEP, the U.S. and other leading nuclear countries would provide an assured supply of reactor fuel and take back spent fuel from those countries willing to forego development of their own uranium enrichment and reprocessing programmes.¹⁰¹

14.4 What GNEP is proposing is supposed to be a proliferation resistant fuel cycle. It proposes the development of more advanced reprocessing and an Advanced Breeder Reactor (ABR).¹⁰² This plan is dangerously misguided and in all likelihood will increase nuclear proliferation. The flows and stockpiles of radioactive wastes, and potential nuclear bomb making materials, would actually increase significantly. A myriad of transport routes will create additional access points at which these materials could be intercepted and diverted. And under GNEP, the US would become a final dumping ground for the waste from other countries.

14.5 The UK Government likes to give the impression that reprocessing is being phased out. The 2008 Energy White Paper says new nuclear power stations should proceed on the basis that spent fuel will not be reprocessed.¹⁰³ But NDA officials have not ruled out future reprocessing saying only that operators of potential new reactors should make their calculations on the premise that reprocessing is not an option, because the government "can't guarantee" that reprocessing facilities will be available. When a Government official was asked in 2007 why the government was ruling out future reprocessing when the US "is starting to take steps toward recycling." He said "ruling out" was probably "too strong" an expression. If at some stage in the future, nuclear operators come forward with reprocessing proposals things may change.¹⁰⁴

14.6 Sellafield trade unions have already started campaigning for a new reprocessing plant at Sellafield so that spent nuclear fuel from new reactors can be reprocessed, and for the possibility of securing reprocessing

⁹⁶ Global Interest in Nuclear Energy May Presage A New Arms Race, Washington Post, 13th May 2008

⁹⁷ Nuclear Programmes in the Middle East: In the Shadow of Iran, IISS, May 2008.

<http://www.iiss.org/publications/strategic-dossiers/nuclear-programmes-in-the-middle-east-in-the-shadow-of-iran/>

⁹⁸ Guardian 21st May 2008 <http://www.guardian.co.uk/world/2008/may/21/middleeast.iran>

⁹⁹ Britain joins US-led nuclear power club, Reuters, 26th Feb 2008.

<http://uk.reuters.com/article/domesticNews/idUKL2650332220080226?sp=true>

¹⁰⁰ New Scientist 9th March 2008

<http://technology.newscientist.com/article/mg19726463.900-controversial-nuclear-club-takes-shape.html>

See also: New Scientist 13th March 2008

<http://technology.newscientist.com/article/dn13459-disposable-nuclear-reactors-raise-security-fears.html>

¹⁰¹ Risky Appropriations: Gambling US energy policy on the Global Nuclear Energy Partnership, by David Schlissel et al. Friends of the Earth USA, Government Accountability Project, Institute for Policy Studies, and Southern Alliance for Clean Energy, January 2008. <http://www.whistleblower.org/doc/2008/GNEPMarch.pdf>

¹⁰² Nuclear Power Joint Fact Finding, Keystone Center June 2007. p91

[http://www.keystone.org/spp/documents/FinalReport_NuclearFactFinding6_2007\(2\).pdf](http://www.keystone.org/spp/documents/FinalReport_NuclearFactFinding6_2007(2).pdf)

¹⁰³ "Meeting the Energy Challenge: A White Paper on Nuclear Power" BERR, Jan 2008 (See page 114)

See also: RobEdwards.com 23rd May 2007 http://www.robenedwards.com/2007/05/uk_signals_aban.html

Independent on Sunday 13th Jan 2008

<http://www.independent.co.uk/environment/green-living/sellafield-cleanup-will-cost-16334bn-769990.html>

¹⁰⁴ Nuclear Fuel, 18th June 2007

contracts from abroad to be kept open; and for existing stocks of UK plutonium at Sellafield to be converted into MoX fuel for use in new reactors.¹⁰⁵

14.7 Now, to cap it all, Gordon Brown is reported to be planning talks with the Japanese Prime Minister about the possibility of new Japanese reprocessing contracts for Sellafield to revive the UK's declining reprocessing industry.¹⁰⁶

14.8 Even without a revival of reprocessing, plutonium fuel transports on UK roads and through the Irish Sea could increase. The Sellafield MoX Plant opened in 2002, at a cost of £470m to provide plutonium fuel to be used in foreign power stations has produced almost nothing since it was opened six years ago. It was originally predicted to have an annual throughput of 120 tonnes of fuel. The energy minister, Malcolm Wicks, has admitted in response to a parliamentary question that it had managed only 2.6 tonnes in any one 12-month period between 2002 and 2006-07. After 6 years - a total of just over 5 tonnes have been produced.¹⁰⁷ In his new book, *Nukenomics*, Ian Jackson, points out that SMP would cost taxpayers £2.3 billion even if its output is successfully ramped up to 10 tonnes a year. The plant is "hopelessly uneconomic".¹⁰⁸

14.9 In May 2008, Sellafield shipped a delayed cargo of highly dangerous plutonium dioxide powder under armed escort to France, simply because the NDA wanted to replace plutonium used in orders for mixed oxide (MOX) fuel that had to be produced in European facilities when Sellafield was forced to sub-contract the orders from the Sellafield MOX Plant (SMP) because of the plant's failure to produce the goods on time. This may be the first of many plutonium-swap shipments as a number of SMP orders have had to be sub-contracted to France and Belgium.¹⁰⁹ The shipment was delayed by two months because its original departure date was leaked in advance to the press.

14.10 The plutonium dioxide powder would be an ideal material for creating a nuclear explosion and for use in a dirty bomb: "the worst possible material" to ship. Yet the Nuclear Decommissioning Authority transported it on an old roll-on roll-off ferry with few security and safety features – even though it has used armed and better-equipped vessels to transport less dangerous nuclear materials in the past.¹¹⁰

14.11 In a letter to *The Guardian*, Michael Meacher said SMP has cost taxpayers nearly half a billion pounds. As minister for the environment, he adamantly opposed the decision to approve this plant in September 2001 on the grounds that it was nowhere near economic, but was overridden by Margaret Beckett (then the secretary of state) and her chief nuclear official, - pressed no doubt also by the strongly pro-nuclear Tony Blair. What the disastrous consequences of this decision now make plain is that the political process for approving enormous projects like these is wholly inadequate. These projects require much more systematic, technical and above all independent evaluation. Officials cannot provide this, and anyway are usually dependent on industry for most of their information.¹¹¹

¹⁰⁵ GMB 18th Jan 2008 <http://www.gmb.org.uk/Templates/Internal.asp?NodeID=96494>

¹⁰⁶ Telegraph 23rd June 2008 <http://www.telegraph.co.uk/money/main.jhtml?xml=/money/2008/06/23/cnjap123.xml>

¹⁰⁷ Guardian 3rd March 2008 <http://www.guardian.co.uk/world/2008/mar/03/nuclear.energy>

¹⁰⁸ Guardian 14th May 2008 <http://www.guardian.co.uk/commentisfree/2008/may/14/fuelforscandal>

¹⁰⁹ Imminent Plutonium Shipment, CORE Press Release 7th March 2008.

<http://www.corecumbria.co.uk/newsapp/pressreleases/pressmain.asp?StrNewsID=246>

¹¹⁰ Independent on Sunday 9th March 2008

<http://www.independent.co.uk/news/uk/home-news/dirty-bomb-threat-as-uk-ships-plutonium-to-france-793488.html>

Telegraph 10th March 2008

<http://www.telegraph.co.uk/news/uknews/1581248/Plutonium-car-ferry-plan-is-%27madness%27.html>

¹¹¹ Guardian 8th March 2008