

Press Briefing

January 2003

LIABILITIES – LABOUR’S HIDDEN SUBSIDY TO NUCLEAR POWER

(including update on Electricity (Miscellaneous Provisions) Bill)

In the next few months, the Government is intending to approve £7 billion worth of subsidies for Britain’s ailing nuclear industry. Parliamentary Bills to transfer the liabilities for nuclear waste management from British Nuclear Fuels plc (BNFL) and British Energy plc to the taxpayer have either been tabled or are imminent.

The balance books of Britain’s nuclear electricity generators could be transformed – but the taxpayer will still be paying the price in one hundred years’ time.

This briefing explains the crises that threaten to cripple both Britain’s nuclear generators and shows how Ministers are piling huge costs onto the taxpayer – while freeing the industry to produce yet more waste.

Nuclear Liabilities

Nuclear power generates energy by nuclear fission – the splitting of atoms of uranium, plutonium and other heavy metals in two. The outcome is a plethora of different sorts of radioactive waste. The high-energy radiation caused by the original fission and the decay of the waste is potentially lethal to people and makes other objects around it radio-active. The radio-activity falls over time, but can still be dangerous for hundreds of thousands of years.

The reprocessing of used nuclear fuel to separate out plutonium and unused uranium for manufacture into new fuel rods makes matters worse by massively increasing the amount of material contaminated. Furthermore, it leaves many waste products in a form that is difficult to store or is vulnerable to terrorist attack. The problem is complicated by the fact that some wastes are highly reactive or generate enormous amounts of heat. This makes their storage and disposal difficult and expensive.

It is vital that the radioactive materials produced by nuclear power do not come into contact with people. The nuclear industry has long argued that sites used for nuclear generation should be allowed to “cool down”, cleared of their radioactive contamination and the waste buried deep underground.

Yet in 1997 the Government rejected an application by NIREX, the industry’s waste disposal company, for a Rock Characterisation Facility - a precursor to a deep waste repository for radioactive wastes - at Sellafield, in Cumbria. The Minister responsible said he remained “*concerned about the scientific uncertainties and technical deficiencies in the proposals*”. In 2001, the Government started a new five-year consultation process to determine what should be done with the waste. For now, it is simply stored, often in a potentially dangerous condition.

The costs of storing and managing these radioactive materials are the long-term liabilities that haunt the nuclear industry. They are included in company balance sheets though costs to be met in the future are reduced to reflect the fact that, if money was set aside now, it would earn interest and be worth more by the time it was needed. This is known as discounting and the reduced costs as 'discounted costs'. As power stations are closed or near the end of their useful life, the value of nuclear generators' assets falls because the main assets – the stations – have less potential to produce electricity. At the same time, the discounted value of the liabilities rises because there is less time left for money set aside to pay for them to earn interest.

Theoretically, the nuclear generators should have started setting aside money for their liabilities when they first started generating power. They didn't, and only started, when required to, by Government in the last decade. Like people who start thinking about their pension shortly before they retire, the industry now finds itself having to meet far higher costs than it can afford.

The scale of the problem

The total cost of dealing with Britain's nuclear waste problem is likely to be more than £60 billion (undiscounted) [1], most of which is a result of nuclear power. But that cost could rise dramatically once more is known about the problem. Decisions on how quickly nuclear sites are cleaned up, whether some wastes can be discharged into the sea and whether reprocessing of used fuel will continue could all dramatically increase costs.

The cost is currently split between the different companies that hold the waste and the Government, which already meets some costs.

British Nuclear Fuels' liabilities are estimated to be £40.5 billion (undiscounted) [2]. Of this 12 per cent (£4.9 billion - undiscounted) is covered by contracts with foreign customers [3]. A further 20 per cent (£8.1 billion - undiscounted) is the responsibility of the Ministry of Defence [4]. This leaves somewhat over £27 billion to be met by BNFL - minus a Government commitment to fund the decommissioning of BNFL's Magnox reactors. The BNFL 2001 Annual Report and Accounts confirms its share as £27.2 billion (undiscounted) or £12.8 billion (discounted). If the Magnox Undertaking (worth £4.8 billion discounted) [5] is excluded, the amount BNFL itself will actually have to pay for is only £8 billion (discounted). However, the Nuclear Liabilities Investment Portfolio, which was established by the company (using money from the Government's non-fossil fuel obligation [6]) to pay for its liabilities is worth only £4 billion.

As a result, BNFL is about £4 billion short of what it needs to meet its liabilities. This is, more or less, confirmed in its 2001 Annual Report which shows discounted liabilities are £3.8 billion more than the assets available to pay for them.

British Energy's liabilities, in 1997, were estimated at £12.9 billion (undiscounted) [7]. The company's latest Annual Report says discounted liabilities are £3.7 billion. When it was privatized, British Energy was required to set up the Nuclear Decommissioning Fund to pay for the decommissioning costs of its reactors. That Fund is now worth £411 million. Other liabilities were supposed to be provided for from operating revenues, despite the fact that many costs won't arise until after British Energy's stations close. British Energy appears to have made no provision to meet its liabilities beyond what it was required to pay into the Fund. That means it appears to be facing a shortfall of about £3.3 billion. This is confirmed by its recent statement to shareholders [8].

The United Kingdom Atomic Energy Authority's liabilities total at least £7.4 billion (undiscounted) [9]. The company's most recent annual report values these at £3.65 billion. However, all of them are already covered by the Department of Trade and Industry and the Ministry of Defence [10].

Thus, the liabilities of Britain's two nuclear generators, BNFL and British Energy are now over £7 billion more than the assets the two companies have set aside to pay for them. They are almost certainly more than the value of the respective companies' total assets. There are four reasons for believing this situation can only get worse.

First, Government figures for the cost of tackling liabilities “represent best estimates based on current knowledge” [11]. The Government admits “better definition of the problem will almost certainly mean that liabilities estimates will rise” [12].

Secondly, estimates are based on current regulations. Tighter regulation will mean greater liabilities. For example, the Government’s recent decision on the discharging of radio-active technetium-99 into the North Sea may lead to BNFL being required to build a new plant to separate out the technetium and to develop new procedures for storing it [13].

Thirdly, estimates are based on current practice. For power stations, this involves delaying final dismantling for up to 100 years after the reactor has closed down, so as to allow the radio-activity to fall [14]. However, this approach is being contested [15]. If earlier dismantling is required, the discounted value of liabilities would rise dramatically (because the payments would be brought forward).

Finally, estimates are based on current thinking about plutonium. At present, used fuel-rods from reactors in the UK (apart from Sizewell B) are sent to Sellafield for reprocessing. This separates the remaining uranium and the plutonium in the fuel for possible manufacture into new fuel rods. This process is expensive. Few countries want to use the ‘Mixed Oxide Fuel’ produced as a result. Only one British reactor is capable of doing so and it is cheaper for it not to. Britain now has a stock-pile of 60 tonnes of plutonium it doesn’t know what to do with [16]. Plutonium is a raw material for nuclear weapons. The cost of rendering it into a safer form that is less vulnerable to theft has not been included in existing assessments of nuclear liabilities. This problem represents a huge potential crisis that the industry has refused to face.

The Government’s response

The Government has a duty to ensure nuclear waste is stored and managed safely. Faced with mounting evidence that it was unable to meet its liabilities, the nuclear industry had no qualms about asking for Government help – even while it was pressing the case for new nuclear power plants.

In November 2001, Trade and Industry Secretary, Patricia Hewitt announced plans to transfer all of BNFL’s remaining liabilities to a new Liabilities Management Authority (LMA) [17]. In July 2002, she published a White Paper detailing her proposals [18]. BNFL will continue to run the Sellafield reprocessing plants, the ‘MOX’ plant, and its Magnox reactors but ownership of the sites and the liabilities associated with them are to be transferred to the new LMA. Mrs Hewitt has promised to publish a draft Bill to set up the LMA in the 2002-3 Parliamentary session [19].

Ministers argue that the transfer would have no effect on public finances because BNFL is state-owned anyway. But, it would certainly have an effect on BNFL’s finances. The £3.8 billion deficit between its assets and its liabilities will be removed by a stroke of the pen.

Meanwhile, privatised British Energy has successfully negotiated an even more audacious transfer of its liabilities. On 4 September 2002, the company wrote to Patricia Hewitt to inform her of “a significant worsening in the company’s financial position”, saying the Board “would have to decide, on legal advice, whether it could continue to meet its liabilities” and asked for Government help [20].

The company’s request was prompted by the failure of talks with BNFL to restructure contracts for the reprocessing of used fuel. But this was only a minor part of its problems. The real problem was that the company couldn’t make enough profit from electricity sales to cover the growing liability of its waste.

Five days later, on 9th September, the Government offered it a £410 million loan facility, despite the fact that British Energy had paid £48 million to its shareholders as recently as May, 2002 (and similar sums in previous years). On 26 September, this was increased to £650 million and extended to 29 November 2002 [21]. This kept the company afloat while talks progressed on its restructuring.

On 28 November 2002, one day before the loan facility ran out, Mrs Hewitt announced Government proposals to restructure British Energy. The core features of her proposal, which has yet to be accepted by British Energy’s share and bond holders are that [22]:

- The Government is to underwrite the full cost of meeting British Energy's liabilities, at a cost of £150-200 million per year, save that British Energy remains liable for:
 - fixed contributions to its Nuclear Decommissioning Fund (currently £20 million per year);
 - £150,000 for every tonne of fuel loaded into the Sizewell B reactor;
 - £275 million of new bonds in a restructured British Energy;
 - 65 per cent of the company's free cash flow.
- State-owned BNFL is to agree new contracts for the fuel British Energy uses and new contracts for the reprocessing of British Energy's used fuel. These vary the price paid by British Energy according to the market price for electricity, rather than the cost to BNFL of providing the services. This provides a partial hedge against market prices for approximately 40 per cent of the company's output.
- British Energy's spent fuel (and therefore liability for its disposal) will belong to state-owned BNFL (and presumably eventually the proposed Liabilities Management Authority).
- BNFL will standstill all payments by British Energy for storage and reprocessing of used fuel until 31 March 2003 – the deadline for the deal to be agreed.

Mrs Hewitt claimed that if British Energy went into administration "all its nuclear liabilities would fall to the Government" [23], but she's proposing to take responsibility for most of them anyway. She's even said that: "there is no real difference in the cost to the taxpayer between the solvent restructuring that we are giving the company a chance to put into place and falling into administration" [24]. The company will also be able to pass on the risk of low electricity prices to the taxpayer via its new contracts with BNFL for fuel and reprocessing.

Legislation to allow the restructuring to take place, or to allow the company to be taken into administration if necessary, was published on 9 January, 2003. Share and bond holders have until 14 February, 2003 to agree the deal. The Government has until 9 March to seek EU approval.

So, in a matter of months, the deficits between the assets and liabilities of Britain's two nuclear generators will be erased. The companies will be richer by about £7 billion, but the taxpayer will be paying the price for the next 100 years.

Lessons unlearnt

The Government seems to have learnt nothing from the failure of Britain's nuclear generators to provide for their liabilities. Nothing is proposed to stop the two companies from making further investments in nuclear power – investments that could lead to yet more liabilities being created and yet more risk that costs will be passed onto the taxpayer. Nuclear lobbyists, meanwhile, are arguing for more subsidy, and for a Government-backed publicity campaign to promote nuclear power [25].

In 1997, Sadnicki and MacKerron, in research supported by Friends of the Earth, warned that a large part of BNFL's liabilities would eventually fall to the taxpayer [26]. At the time BNFL was cash-rich and could have set aside money for its long-term liabilities [27]. It didn't. Instead, it used the spare cash to buy foreign nuclear companies (eg: Westinghouse, ABB) [28] and to invest in risky nuclear ventures (for example, the loss-making Sellafield 'MOX' Plant) [29]. Ministers could have prevented this, but chose not to.

There is nothing in the Government's proposals to prevent BNFL from investing any profits it makes in the future in yet more risky nuclear ventures. There isn't even a requirement for BNFL to set up a Liabilities Management Fund to cover the clean-up costs of those plants that it will still own (eg: the Springfields fuel manufacturing plant and its £300 million of liabilities)[30]. It is very possible that their liabilities will be passed on to the tax-payer.

But, on the strength of its new finances, BNFL will be perfectly entitled to borrow and to invest the money borrowed in new nuclear plants that produce yet more nuclear waste. Furthermore, the proposals envisage BNFL continuing to operate plants whose wastes which will be the responsibility of the LMA. BNFL will have absolutely no incentive whatsoever to operate these plants in ways which minimise the wastes produced.

Sadnicki and MacKerron also warned that the component of British Energy's liabilities, not covered by its Nuclear Decommissioning Fund, could eventually fall to the taxpayer [31]. This risk was identified by the National Audit Office in 1998 [32] while the Nuclear Installations Inspectorate said in 2001 that it "understands that the Department of Trade and Industry will be reviewing these risks" [33]. No such review appears to have been undertaken.

When the risk finally became an impending reality, Ministers argued they had little choice but to act as they did. But their decision to support the company's solvent restructuring leaves it free to continue to produce nuclear waste. The company can do what it likes with the 35 per cent of its free cash flow that is not earmarked for liabilities. Again, as in the case of BNFL, the restructuring proposals contain no provisions to prevent British Energy investing any future profits in new nuclear plant or to ensure it sets aside funds for the new liabilities it will have to meet, should it do so [34].

Questions half-answered

Ministers' proposals for both BNFL and British Energy leave a host of questions unanswered. For example, in respect of BNFL, Ministers have yet to:

- state unequivocally the value of the transfer of assets and liabilities between BNFL and the proposed Liabilities Management Authority;
- say what BNFL will be worth after the establishment of the LMA and whether any proceeds from its possible part-privatisation will be used to meet its liabilities;
- provide a complete breakdown of which assets of BNFL will be transferred to the new LMA and which will be retained, including what will happen to potentially income-generating assets such as its patents for different reactor designs.

The full implications of the British Energy rescue package are also difficult to untangle. Friends of the Earth wrote to Patricia Hewitt in November and December 2002 raising a series of questions about her proposed rescue. On 6 January, 2003, Energy Minister, Brian Wilson replied on Mrs. Hewitt's behalf. We asked amongst other things:

- **whether the Government had carried out any reviews of the risk that British Energy's liabilities might eventually fall to the taxpayer, and if so, what these concluded and would they be published.** Mr Wilson claimed that: "whilst the company lobbied us on various aspects of its business and, earlier last year, gave the Department information on some aspects of its financial position which we assessed with our advisors, we were unaware of the full extent of the financial problems at the company until the company wrote to the Department on 4 September about its critical financial position." He did not respond to our request that any reviews carried out should be published.
- **what proportion or what value of British Energy's liabilities the Government proposed to take on.** Mr Wilson says the Government is taking: "financial responsibility for the company's historic spent fuel liabilities under the BNFL contracts (currently estimated at £2.1 billion and extending up to 2086...)". He maintains that "the restructured British Energy will pay its way going forward" but says the Government is "underwriting new and enhanced arrangements by the company to meet decommissioning and other back-end liabilities". What this underwriting involves and how much it might cost is unclear.
- **the expected cost, to BNFL (and the taxpayer), of the proposed new contracts for fuel manufacturing and reprocessing, that vary the price paid by British Energy according to the wholesale price of electricity, rather than by the costs to BNFL.** He says this is "a matter for the companies". However, Keith Lough, Finance Director of British Energy, has told shareholders that the new contracts are worth £150 million per year to British Energy [35]. This is an on-going subsidy that, if continued for more than a decade, is equivalent to a cash payment of well over £1 billion. It will make a serious hole in BNFL's finances and could scupper the profitability of its already costly reprocessing operations.

Mr Wilson didn't answer our questions about the **costs to BNFL of its offer to standstill payments** for storage and reprocessing of British Energy's waste until 31 March 2003. Neither did he say what effect BNFL's agreement to assume title for British Energy's used fuel will have on BNFL's finances – or the taxpayers, should proposals to transfer BNFL's liabilities to the taxpayer be implemented. The used fuel is likely to be worth very little, especially as no proposals exist for its plutonium and remaining uranium to be used in new nuclear reactors. Title for this fuel is therefore likely to prove a liability rather than an asset.

Ministers have also said very little about how cost-effective their proposals are in comparison with alternatives such as:

- ending the reprocessing of used fuel and shutting the Sellafield reprocessing plants (THORP and B205) and the Sellafield MOX Plant;
- immediate shutdowns of BNFL's older Magnox nuclear reactors;
- restructuring BNFL into a not-for-profit waste management company, including:
 - the sale of its foreign subsidiaries;
 - the sale of its UK-based fuel production operation (with accompanying legislation to ensure the creation of a fund to manage its liabilities);
 - the sale of its share in Urenco Ltd, a uranium enrichment company (with accompanying legislation to ensure the creation of a fund to manage its UK liabilities);
- taking British Energy into administration and establishing it as a not-for-profit company.

Friends of the Earth's correspondence with Ministers asked "what assessments have been made of the extent to which the proposed restructuring of British Energy represents best value for money for the taxpayer, especially given alternatives such as cancellation of the THORP reprocessing contracts and taking British Energy into administration".

Mr Wilson's reply suggests no alternatives have been considered besides the proposed bail-out. He argues that "administration is not a 'free' option or panacea" and that "with regard to the THORP... spent fuel management contracts between British Energy and BNFL are a matter for the companies".

Friends of the Earth believes this is disingenuous. Reprocessing used fuel massively increases the volume of nuclear waste created and creates highly active liquid wastes that need expensive treatment if they are to be safely stored. If title for British Energy's used fuel is to pass to BNFL and responsibility for managing BNFL's waste is to fall to the taxpayer, responsibility for managing wastes created by the reprocessing of British Energy's used fuel will also fall to the taxpayer. The taxpayer has an interest in keeping this cost to a minimum. If ending reprocessing would cut this cost, the taxpayer deserves to be told.

Unsurprisingly, the House of Commons' Trade and Industry Committee has called for "an independent assessment ... of the value of the assets to be transferred from BNFL to the LMA ... to ensure that the terms of the transfer of assets and liabilities represent the best value for money for the taxpayer" [36]. They have yet to report on the value for money of Government proposals for British Energy.

A blank cheque – part 1

On 6th January, 2003, Patricia Hewitt published the Electricity (Miscellaneous Provisions) Bill. The Nuclear Energy (Massive Subsidy) Bill would have been a better title. The Bill, if passed, not only gives the Government far reaching powers to bail out British Energy, but also extends its powers to subsidise nuclear power more generally. It makes provision for the transfer of British Energy's liabilities to the tax-payer, for payment of massive subsidies to the company and even for its wholesale re-nationalisation, but in a way that could also be applied to BNFL.

The Bill isn't long. It's only got five clauses. But they are enough.

Clause 1 gives the Government broad ranging powers to subsidise or renationalise British Energy, subject to European State Aid rules. Subsection 1(a) gives the Secretary of State power to subsidise the company, even if it is privately owned. Subsection 1b gives her the power to buy it or parts of it either directly or through a Crown company (such as BNFL). Subsection 1c enables her to subsidise any part of the company she has acquired.

Clause 2 repeals Sections 72 and 74 of the Electricity Act 1989 that limited the Government's power to buy shares in British Energy. It also gives her power to repeal, by order, other Sections of the 1989 Act dealing with electricity privatisation that might impede her rescue plan.

Clause 3 extends Section 97 the Electricity Act 1989. This Section had originally empowered the Government to subsidise through grants, loans or guarantees the storage or reprocessing of nuclear fuel; the treatment, storage or disposal of radioactive waste and the decommissioning of nuclear facilities. But it limited the Government to spending only £1 billion in doing so (though this could be increased to £2.5 billion, by an Order of Parliament). Clause 3 firstly removes the limit and secondly gives the Government power to provide the subsidy through a third party (eg: BNFL or the new LMA).

Clause 4 makes provisions to prevent Government subsidies to British Energy affecting its tax bill, while Clause 5 gives the Bill its short title.

The Department of Trade and Industry's Explanatory Notes that accompany the Bill say:

“the Bill does not of itself incur expenditure ... It will permit, but will not require, spending money on British Energy or potentially acquiring a successor company. The financial cost ... would depend on how the Government acted in any particular case” [].

In effect, the Bill is a blank cheque for the subsidy of nuclear power. The powers under Clause 1 are limited to British Energy, but the Government could still use it to buy British Energy's nuclear plants on behalf of BNFL. Clause 3 enables the Government to subsidise BNFL directly – whether to help it cut prices to British Energy or to maintain its own reprocessing operation.

A blank cheque – part 2

The Government has promised to introduce a draft Bill to enact the proposals in the White Paper “Managing the Nuclear Legacy”. Meanwhile it has set up a Liabilities Management Unit in the DTI as a shadow LMA. Bit by bit negotiations are taking place to decide which bits of BNFL will end up where. Once these are completed, the draft Bill will be published.

Learning the lessons

Government proposals to take on £7 billion of increased spending should have been subject to careful scrutiny before, not after, they were announced to Parliament. If previous investments had left the taxpayer with substantial liabilities, lessons should be learnt that could then be applied back to decisions on future investments.

However, Parliamentary and public debate on the Government's proposals has been stymied. The proposals were negotiated behind closed doors and then announced to Parliament through Statements that leave key questions unanswered. Even the White Paper “Managing the nuclear legacy” doesn't put a cost on its proposals.

It is possible that Parliament may learn more when the draft Bills to facilitate the restructuring of BNFL and British Energy are debated. But by then it may be too late to draw lessons from what has happened for the future of nuclear power - decisions on future energy policy are being made now in

advance of an Energy White Paper which is expected in late February.

The principal lesson the Government should learn is that the risk of substantial liabilities eventually falling to the tax-payer is inherent to nuclear power. Alternative renewable energy technologies don't leave behind a legacy of contamination and don't pose this risk.

All nuclear generators should therefore be required to establish segregated funds to provide for the liabilities of any investment they make that creates nuclear waste. Such requirements should assume the most rigorous clean-up procedures – otherwise the Fund may prove inadequate to meet future regulatory demands.

Reliance on voluntary provisioning or on partial provisioning (as was the case with British Energy) is insufficient because it leaves the nuclear generator with enormous power over the Government. The generator can pay out to shareholders and under-provide for its liabilities in the knowledge that, should they become unmanageable, the Government would prefer to bail the company out rather than risk having to meet its liabilities in full should the company go bankrupt.

However, Friends of the Earth believes that even a requirement to set up segregated funds to meet liabilities is insufficient to justify the use of nuclear power.

- Regardless of who pays for it, nuclear waste is a toxic legacy that will last for hundreds of thousands of years. No secure method has been found for its disposal.
- Nuclear power produces plutonium, a raw material used to make nuclear weapons. This requires special management, over and above that of other nuclear wastes.
- Nuclear power carries an inherent risk of catastrophic accident that has, in the case of Chernobyl, and could again contaminate parts of the world with radio-activity.
- Nuclear power is an inflexible technology that is unsuited to providing electricity to meet varying demand.
- Nuclear power is more expensive than many forms of renewable power.

Friends of the Earth believes the Government should follow Sweden, Spain, Belgium, Germany and the Netherlands [37] and phase out nuclear power.

BNFL should be restructured to focus on the management of the nuclear waste it has produced. Its Magnox reactors, the THORP and B205 reprocessing plants and the Sellafield MOX plant should all be closed down as soon as possible. Its foreign subsidiaries should be sold off. Its fuel manufacturing operation should also be privatised, but with a requirement that a segregated fund be set up to manage any wastes it produces. BNFL's share in the uranium-enrichment company, Urenco Ltd, should be disposed of, and new legislation should include provisions to ensure Urenco Ltd sets up a segregated fund to provide the liabilities at its Capenhurst site. All proceeds from the sale or privatisation of BNFL and its constituent parts should be directed to the management of nuclear waste.

This approach would also deal with a major criticism of the White Paper – that it separates responsibility for the management of waste from responsibility for its production, leaving BNFL to operate plants that produce waste with no incentive to reduce its production. Under these arrangements BNFL would no longer create waste.

Meanwhile, the option of taking British Energy into administration and restructuring it as a not-for-profit company deserves serious consideration. A simple analysis of the figures in the company's announcement to the Stock Exchange suggests it could make up to £100m profit per year under the new arrangements. This suggests it would have about £35 million to give as dividends to shareholders – money that would otherwise have been available to provide for its liabilities.

CONTACT

Roger Higman 020 7566 1661
Press Office 020 7566 1649

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