Energy Fair

Chris Huhne MP
Secretary of State for Energy and Climate Change
DECC
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22nd July 2010

Dear Chris Huhne,

Many thanks for your reply to my letter of the 26th of May (via Darwin McIntosh of the DECC Correspondence Unit) and for confirming that there will be no public subsidy for new nuclear power stations. We infer that any new nuclear power stations in the UK will not be allowed to benefit from any of the subsidies described in the *Nuclear Subsidies* report[1] and summarised in my letter:

- *Limitations on liabilities:* the operators of nuclear plants pay much less than the full cost of insuring against a Chernobyl-style accident or worse.
- *Underwriting of commercial risks:* the Government necessarily underwrites the commercial risks of nuclear power because the operators of nuclear plants cannot be allowed to fail.
- *Protection against terrorist attacks:* at least some of the cost of protection against terrorist attacks is born by the Government.
- *Short-to-medium-term cost of disposing of nuclear waste:* operators of nuclear plants are paying much less than the full cost of disposing of nuclear waste.
- *Long-term cost of disposing of nuclear waste:* much of the long-term cost of disposing of nuclear waste will be paid by people who are not yet born.
- *Underwriting the cost of decommissioning nuclear plants:* the Government bears the risk of cost overruns in decommissioning nuclear plants.
- *Institutional support for nuclear power:* the Government is providing various forms of institutional support for the nuclear industry.

The following sections describe what we think needs to be done to ensure that any new nuclear power stations will not benefit from those subsidies. We would be grateful if you would let us know whether or not you agree with what we say and, if not, tell us where you disagree.

1 Limitations on liabilities

To ensure that there is no subsidy for new nuclear power stations, the operators of any such plants should pay the full cost of insuring against claims arising from nuclear accidents, up to and including a Chernobyl-style accident or a full melt down of the plant. Claims should be considered from any and all countries that may be affected, not just the UK.

[1] The *Nuclear Subsidies* report may be downloaded from http://www.mng.org.uk/nsubsidies.pdf.

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If the necessary insurance can be obtained from a commercial insurance company or consortium of such companies, then the operator of any new nuclear plant should be required to take out that insurance.

If the necessary insurance cannot be obtained commercially, then the following procedure should be followed:

- Two or more people with relevant actuarial expertise, and that are independent of any interested parties, should be commissioned to calculate (independently) what the commercial premium would be for insurance against nuclear accidents as described above. The premium may be calculated as a single payment to be made before any new nuclear plant starts working or it may take the form of annual installments to be paid during the operational life of the plant.
- The calculations should be available for public scrutiny. Revisions may be required until all parties are satisfied that the calculations are fair.
- The operator of any new nuclear power station would be required to pay the agreed premium to the Government—since the Government would be the *de facto* provider of insurance.

1.1 International treaties?

A possible objection is that the Government would not be free to follow the procedure just described because of the existence of one or more international treaties about limitations on liabilities for nuclear power.

In that case, if the Government is to honour its commitment that any new nuclear power stations should "receive no public subsidy" (*The Coalition: our programme for government*,[2] page 17), we believe that the following procedure should be followed:

- The Government should withdraw from any such treaties or renegotiate the parts dealing with limitations of liabilities for nuclear power.[3]
- UK laws or regulations should be changed to ensure that the operators of any new nuclear plants would be required to pay for full insurance against nuclear accidents, as described above.
- No work should be allowed on the building of any new nuclear power station until those two steps have been completed.

2 Underwriting of commercial risks

Because of the physical risks associated with nuclear power, the operators of nuclear plants cannot be allowed to fail—witness the bail out of British Energy in 2005. There is no equivalent problem with renewable sources of power.

If taxpayers are required to take on the financial risk of having bail out a nuclear operator, that is a subsidy for nuclear power.[4] To ensure that taxpayers are not providing a subsidy of that kind, the

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[2] The document may be downloaded via a link from http://programmeforgovernment.hmg.gov.uk/.

[3] This makes good sense in any case because any justification that may once have existed for limitations on liabilities for nuclear power has long-since disappeared. With the end of the cold war and moves towards nuclear disarmament, few if any nuclear materials are required for nuclear weapons. And it is now clear that, for power generation, there are more than enough alternatives that are better and cheaper than nuclear power (see http://www.energyfair.org.uk/misallocation).

operators of nuclear plants should be required to take out appropriate insurance, much as described in Section 1.

3 Protection against terrorist attack

Nuclear plants, and trains and ships carrying nuclear fuel or nuclear waste, are vulnerable to attack by terrorists. There is no equivalent problem with renewables.

To ensure that there is no public subsidy arising from these risks, the operators of any new nuclear plant should be required to pay the full cost of protecting the plants from terrorist attack and the full cost of protecting trains and ships carrying nuclear fuel to the plant and carrying nuclear waste away from the plant.

Since any such protection can only ever be partial, the operator of any new nuclear plant should also be required to take out insurance against the damage arising from a terrorist attack, including any consequent damage caused by terrorists by means of a 'dirty bomb' or similar device.

4 Short-to-medium-term cost of disposing of nuclear waste

In connection with the short-to-medium-term costs of disposing of nuclear waste, the operators of existing nuclear plants in the UK enjoy subsidies from two different sources:

- They pay much less than the full commercial price of disposing of nuclear waste.[5]
- Taxpayers take on the risk of cost overruns in the disposal of nuclear waste.

To ensure that there are no similar subsidies for the operator of any new nuclear plant in the UK, any such operator should be required to pay the full commercial price for the short-to-medium-term costs of disposing of nuclear waste, and they should be required to take out insurance against cost overruns in the disposal of nuclear waste.

5 Long-term cost of disposing of nuclear waste

Some categories of nuclear waste will remain dangerous for thousands of years. Future generations will bear the risks and the associated costs but they will receive no compensating benefit. This is a subsidy to the present-day nuclear industry that is provided by people who are not yet born.

There is no satisfactory solution to this problem and that in itself argues for an outright ban on the building of any new nuclear power stations.

At the very least, the operators of any new nuclear plants should be required to pay some kind of fee to the Government in recognition of the long-term damage that their operations will cause.

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[4] No doubt, in the event of a bail out, the Government would evemtially sell the company and recoup some of its outlay. But taxpayers should not have to foot the bill for administration costs and should not have to shoulder the risk of an overall loss from the operation.

[5] Writing in *Nuclear Engineering International* ("Buried costs", April 2008), Ian Jackson says that a "fully commercial price [for the disposal of nuclear waste] would make disposal far too expensive, killing the prospects of any new nuclear build programme in Britain …. The bottom line 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/m^3, but the NDA's true marginal 'cost' is nearer to £67,000/m^3, and the commercial 'value' of the repository asset could approach £201,000/m^3 if operated as a fully private sector venture.". These points are made with more detail in Ian Jackson's book *Nukenomics*, pp 61-63.

6 Underwriting the cost of decommissioning nuclear plants

There is substantial uncertainty about the cost of decommissioning nuclear plants[6] and, at present, taxpayers bear the risk of cost overruns.

To ensure that this subsidy for nuclear power is not provided for any new nuclear plants, the operators of any such plants should be required to insure against cost overruns in decomissioning, much as described in Section 1.

7 Institutional support for nuclear power

It appears that the Government is providing various kinds of institutional support for the nuclear industry.[7] All such subsidies should be withdrawn.

As I mentioned earlier, we would be grateful if you would let us know whether or not you agree with what we say and, if not, tell us where you disagree.

Yours sincerely,

Dr Gerry Wolff PhD CEng

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[6] Ian Jackson writes: "Decommissioning has been described as rather like a Chinese puzzle box in which new problems are revealed the deeper one looks, as successive layers of complexity are revealed. Each year the decommissioning management contractors tend to look a little deeper at what needs to be done and then cost the clean-up tasks accordingly from the bottom up. As a result, the Nuclear Decommissioning Authority's three-year near-term cost projections are reasonably accurate but forecasts of the total lifecycle cost for taxpayers remain highly speculative. It is these difficult long-term cost projections that are rising by 9 per cent annually. In September 2007 the National Audit Office, which formally audits the Nuclear Decommissioning Authority's annual accounts, commented: 'It is not possible to quantify reliably the impact on the Nuclear Decommissioning Authority's future financial results of the settlement of these liabilities.'" (*Nukenomics: the commercialisation of Britain's nuclear industry*, Sidcup: Nuclear Engineering International Special Publications, 2008, ISBN 978-1-903077-55-9, page 25)

[7] See Section 2.7 of *Nuclear Subsidies*, http://www.mng.org.uk/nsubsidies.pdf.