Briefing June 2011

Nuclear power subsidies

The Secretary of State for Energy, Chris Huhne MP, was clear - new reactors should only proceed without public subsidy. (1) But now the Government is planning to "*rig the carbon trading market*" and increase electricity bills, subsidising nuclear power by the back door. (2)

More conventional taxpayer subsidies are also planned. (3) In May 2010 Chris Huhne said even support in the event of a nuclear disaster was out of the question. (4) Yet the Government is proposing to place a cap on the liability of nuclear companies in the event of an accident of £1 billion. This compares with the latest estimates of clean-up cost after the Fukushima disaster of up to $250bn (5).

Setting a Fixed Unit Price for waste disposal from new nuclear reactors with a cap on charges to nuclear operators transfers to the taxpayer the risk of cost overruns. (6)

Former Government Advisor, Tom Burke, says it is "*...clear that neutering the planning system, capping the cost of radioactive waste management, continuing to accept the bulk of the nuclear industry's third-party liabilities and putting in a floor price for carbon* [is not going to be] *enough."* So the much needed reform of the electricity market will be used to disguise nuclear subsidies. (7)

Consumer Subsidies

The House of Commons Energy and Climate Change (ECC) Committee report on Electricity Market Reform concluded that the Government is planning to distort the market to save political face having promised not to subsidise new reactors, now that it is clear reactors won't go ahead without some form of subsidy. (8)

The only company pleased with all the government's proposed reforms is EDF – the owner of most of Britain's existing nuclear stations – because it will be in line for a large windfall. (9) Treasury economic secretary Justine Greening said the carbon floor price could benefit the existing nuclear sector by an average of £50m per annum to 2030. (10)

WWF's evidence to the ECC committee argued that because of the importance of rapidly decarbonising the power sector by 2030 in the most environmentally sustainable, cost-efficient and economically beneficial way possible, the other subsidy proposed under the Electricity Market Reforms – the system of feed in tariffs - should primarily apply to renewable technologies. If nuclear power were to benefit it would represent a subsidy and would therefore break the government's own pledge not to subsidise new nuclear. (11)

Impact on Consumers

It is widely agreed that energy prices will increase over the next 20 years whichever energy path we follow, (12) which makes it all the more important that whatever reforms are implemented pay due regard to the needs of the 4.5 million households living in fuel poverty. Ofgem has predicted that, in the worst-case scenario, household energy bills could double to £2,000 a year within a decade (13) adding another million households to those in fuel poverty. (14)

The "Green Deal" is supposed to be key to improving household energy efficiency and tackling fuel poverty. (15) But it is still unclear whether the Green Deal will deliver the promised savings to low income households. (16) Research by E3G suggests householders are likely to reject the scheme because of its high cost. (17) A survey by the Federation of Master Builders (FMB) found builders expect the response to the Green Deal to be "*underwhelming*". (18)

Professor of Energy Policy at Exeter University, Catherine Mitchell, says what's needed is a new type of energy system with regulated obligations on the scale of the transition from town gas to natural gas. Tendering for street-by-street or area-by-area contracts to make homes energy efficient would be much more cost effective. (19)

Energy Efficiency & Demand Management

The Government's Revised Draft Overarching National Policy Statement on Energy foresees a need for a doubling or even tripling of total installed electricity capacity by 2050. (20) Yet Germany, which is planning an entirely non-nuclear route, even with the same 2050 objective of an 80% reduction in greenhouse gases, expects electricity demand to be 25% below present levels by implementing an energy efficiency programme. (21) The UK's 26 million households are responsible for around 27% of greenhouse gas emissions. The obvious question is why are we not planning to refurbish existing households at around 700,000 houses per year in order to make the required contribution to the UK's greenhouse gas emissions target?

Taxpayer Subsidies

Nuclear Liability

The Government is proposing to cap nuclear operators' liabilities in the event of a nuclear accident at £1bn rather than the current £140m. (22) The cap was introduced because no company can obtain insurance against a nuclear accident – or would want to shoulder the risk themselves – because the costs could potentially be limitless. But agreeing to cover any costs above £1bn clearly amounts to a public subsidy. (23) This compares with the latest estimates for the cost of the clean-up after the Fukushima disaster of up to $250bn (24) One study estimates that insurance premiums for nuclear power could add between €0.14/kWh and €2.36/kWh to the cost of a unit of nuclear electricity. (25)

Subsidies for Nuclear Waste Management

The Energy Act 2008 requires operators of new nuclear reactors to have in place plans to carry out and fully fund decommissioning, managing and disposal of the radioactive waste they will produce. (26) As part of these arrangements nuclear operators will need to set aside funds to pay for waste 'disposal'. The Government consulted recently on an updated Waste Transfer Pricing (WTP) methodology to propose a way of calculating how to share costs for a Geological Disposal Facility (GDF) between new reactor operators' waste and so-called "legacy waste". Because of uncertainties, not least because there is not even a site yet for a GDF, the Government is proposing to wait 30 years before fixing a price. Instead it will charge operators an expected price plus a small risk premium. The Final Price will be subject to a cap which will not be exceed no matter what happens! (27)

Given that the operational 'life' of most reactors to date has been approximately 30 years, the deferral period is too long, and risks leaving too little time to make up costs if there is a deficit or if reactors close earlier than anticipated. There is a risk of the taxpayer having to find the additional money if the industry is allowed too much time before it has to commit to a final price.

Nuclear consultant Ian Jackson has looked at the costs of spent fuel disposal, the prices energy companies will be charged by government and what public subsidies may need to be paid in the

future. He concludes that the total subsidy needed could be as much as £427m per 1.35GW PWR reactor. (28) The only way to guarantee utilities pay the full costs of disposal is to charge them the actual cost. Estimating realistic disposal prices 100 years into the future is fraught with difficulty. (29)

Conclusions

The Government appears to be planning to force consumers to subsidise nuclear power through its electricity market reforms, driving an extra million households into fuel poverty, and place a cap on the liability of nuclear operators for the costs of nuclear accidents. Paying for commercial insurance could add around half a euro to the cost of a unit of electricity, so a cap on liability represents a subsidy. Offering new nuclear operators a fixed unit price for the cost of spent fuel management and disposal represents a subsidy of around £427 million per reactor.

Recommendations

1. **The carbon floor price should not be used to benefit existing nuclear reactors.**
2. **The Feed-in-Tariffs with Contracts for Difference should be technology-specific and reflect both the environmental performance and the maturity of the technology. Nuclear should not benefit from price support.**
3. **The EMR package must give greater attention to the task of improving energy efficiency. Without such measures many more households will be pushed into fuel poverty over the coming decades.**
4. **Proposals to limit nuclear operators' liability to £1bn should be rejected.**
5. **Proposals to offer nuclear operators' an estimated fixed unit price for nuclear waste disposal with a deferral for 30 years and a cap on the final price should also be rejected.**

Further Resources Available:

1. **UK Daily Nuclear News** sent by e-mail every morning. See http://www.no2nuclearpower.org.uk/news/index.php
2. **Monthly NuClear News -** designed to keep climate campaigners informed about nuclear developments in the UK, and anti-nuclear campaigners about climate issues. Building more reactors will make the climate change problem worse. See http://www.no2nuclearpower.org.uk/nuclearnews/index.php

Sign up to both mailing lists here: http://www.no2nuclearpower.org.uk/maillist/
For more info contact Pete Roche on pete@no2nuclearpower.org.uk
A longer version of this briefing is available at
http://www.no2nuclearpower.org.uk/reports/Nuclear_power_subsidies.pdf

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