



## **Energy Review Update Issue 7.** **30<sup>th</sup> June 2006**

1. **Britain's new nuclear age?**
2. **Lib Dems say nuclear is too expensive.**
3. **Environment Agency attacks Blair.**
4. **Sustainable Energy: Tories to outflank Blair?**
5. **When does a carbon price become a hidden subsidy?**
6. **EDM 2412: nuclear waste trains**
7. **Scotland leads dash for renewables.**
8. **Terrorism fears over new reactors**
9. **Radioactive waste report not a 'green light'**
10. **Electricity is not the same as energy.**
11. **Nuclear decommissioning – Caithness-style**
12. **Uranium – is there enough?**
13. **Micropower and the law**

### **1. Britain's new nuclear age?**

A formal decision to approve a new generation of nuclear power stations was widely expected to be given at the cabinet's Energy and Environment Committee on Monday 26<sup>th</sup> June. The meeting, chaired by Tony Blair and attended by senior ministers including Gordon Brown, and Alistair Darling was expected to put the final touches to the government's recommendations in its energy review. [1]

To many, the energy review has looked, all along, like a transparent device to marshal the arguments behind a decision already made. As Blair once said (about plans for Scottish regiments): "*We will have an opportunity to have a proper debate once the decision is made.*" [2]

Greenpeace set out its case in a full-page advert in many of the national newspaper on 20<sup>th</sup> June. The advert said you may be surprised to learn that the Energy Review is not just about nuclear power, but is a choice between two energy systems: centralised or decentralised. [3]

[1] Independent on Sunday 25th June 2006

<http://news.independent.co.uk/uk/politics/article1096227.ece>

Scottish Herald 26th June 2006 <http://www.theherald.co.uk/news/64749.html>

Daily Mail 26th June 2006

[http://www.dailymail.co.uk/pages/live/articles/news/news.html?in\\_article\\_id=392411&in\\_page\\_id=1770](http://www.dailymail.co.uk/pages/live/articles/news/news.html?in_article_id=392411&in_page_id=1770)

Telegraph 26th June 2006

<http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2006/06/26/nuke26.xml>

[2] Independent on Sunday 25th June 2006

[http://comment.independent.co.uk/leading\\_articles/article1096139.ece](http://comment.independent.co.uk/leading_articles/article1096139.ece)

[3] Greenpeace Press Release 20<sup>th</sup> June 2006

<http://www.greenpeace.org.uk/climate/climate.cfm?ucidparam=20060620143729>

## 2. Lib Dems say nuclear is too expensive

Nuclear power could become a millstone around the neck of the British economy, Sir Menzies Campbell has warned in a speech to the CBI. He said he had little doubt that a decision to go nuclear will crowd out investment in renewable energy. [1] In the House of Commons he called nuclear energy "the ultimate stealth tax", arguing that taxpayers and consumers could be faced with a bill of tens of billions of pounds. [2] His latest attack is reinforced by new research by the party showing it could only be made to work using vast taxpayer subsidies or a rigged market. "The real question for the forthcoming energy review is, where will Blair hide his nuclear subsidy?" [3] Writing in *The Guardian*, the Liberal Democrat Environment Spokesperson, Chris Huhne said nuclear power is now so discredited that even the World Bank won't lend money to build reactors. The reality is that nuclear is a tried, tested and failed technology. There is nothing to stop private investors from building nuclear reactors today, but not a single private consortium has done so anywhere in the world without lashings of taxpayers' largesse since the accidents at Chernobyl and Three Mile Island. [4]

*The Financial Times* (FT) said Sir Menzies raised legitimate doubts about whether new reactors could be built "without massive state subsidies" or "rigging the market" to guarantee future prices. [5] The government made exactly the same point in its 2002 energy review when it said "*nowhere in the world have new nuclear stations yet been financed within a liberalised electricity market*". That is precisely why the whole nuclear industry is keenly watching the outcome in the UK for its implications elsewhere. If new reactors can be funded in the highly liberalised UK energy market, then they should face no problem in the more regulated parts of Europe or the US.

The Liberal Democrat's document says Finland's new nuclear power station under construction required subsidies in the form of guarantees on decommissioning costs and waste disposal, guarantees on market and price and construction subsidies in the form of export guarantees and below market interest rates and the United States' Energy Policy Act in 2005 included \$13.7 billion in subsidies, to cover insurance for construction delays, loan guarantees for construction costs and operating subsidies. We are also reminded that no nuclear station in Britain has been built on time and to cost. [6]

In a letter to the FT, Liberal Democrat Energy Spokesperson, David Howarth MP said whilst the Party is in favour of carbon pricing it suspects the government will skew the carbon market by deliberately underestimating nuclear power's carbon output. Taking into account the whole nuclear fuel cycle, carbon emissions from nuclear are four or five times that produced by renewables.

Howarth went on to say that the fact new reactors cannot be on line for 10 or 12 years is important because by then carbon capture and storage, tidal power and microgeneration all have a strong chance of making major contributions, but, if we go down the nuclear route, we will have adversely affected investment in renewables and energy efficiency and undermined progress towards the decentralised grid we need to make microgeneration and widespread renewable energy work. New nuclear can make no short-term contribution and only a marginal contribution in the next 30 years, to the problem of gas supply security. In fact gas dependency could be higher under a nuclear strategy than under a non-nuclear strategy, if renewables and energy efficiency have been undermined. [7]

[1] Scottish Herald, 13th June 2006 <http://www.theherald.co.uk/news/63918-print.shtml>

BBC 13<sup>th</sup> June 2006 [http://news.bbc.co.uk/2/hi/uk\\_news/politics/5073786.stm](http://news.bbc.co.uk/2/hi/uk_news/politics/5073786.stm)

[2] Daily Mail, 20th June 2006

[http://www.dailymail.co.uk/pages/live/articles/news/news.html?in\\_article\\_id=391525&in\\_page\\_id=17](http://www.dailymail.co.uk/pages/live/articles/news/news.html?in_article_id=391525&in_page_id=17)

ePolitix 20<sup>th</sup> June 2006

<http://www.epolitix.com/EN/News/200606/22acb554-4d48-4acf-a492-194f91d23da4.htm>

<http://www.epolitix.com/EN/News/200606/e006e735-541c-4a8d-ba27-1153d34fb2ff.htm>

[3] Where will Blair hide his nuclear tax bombshell? Liberal Democrat Trade and Industry Team, June 2006. <http://www.libdems.org.uk/media/documents/policies/Nuclear-tax-bombshell.pdf>

[4] Guardian 20th June 2006 <http://www.guardian.co.uk/commentisfree/story/0,,1801670,00.html>

[5] FT Editorial 21st June 2006

[http://www.ft.com/cms/s/c607b302-00c2-11db-8078-0000779e2340,\\_i\\_rssPage=063fb9c2-3000-11da-ba9f-00000e2511c8.html](http://www.ft.com/cms/s/c607b302-00c2-11db-8078-0000779e2340,_i_rssPage=063fb9c2-3000-11da-ba9f-00000e2511c8.html)

[6] For more info on this see:

The World Today, April 2006, Nuclear Amnesia by Walt Patterson.

<http://www.waltpatterson.org/nucamnesia.pdf>

[7] FT 23rd June 2006 <http://www.ft.com/cms/s/402c5e2a-0254-11db-a141-0000779e2340.html>

### 3. Environment Agency attacks Blair

Tony Blair has been accused by his own environmental watchdog of ignoring its recommendations in his rush to authorise a new wave of nuclear power plants. In a memo to the Trade and Industry Committee the Environment Agency casts doubt on the financial impact of investing billions of pounds in a new generation of reactors claiming it could siphon away resources from greener alternatives. Officials at the agency fear the energy review is biased towards the nuclear option. [1]

The Agency's Energy Review submission says it is "...concerned about the displacement effect that a large programme of investment in one capital-intensive technology like nuclear may have on energy efficiency, CHP and renewable technologies ... There is a danger that an excessive focus on nuclear power and electricity supply will mean an insufficiently robust approach to all primary energy, including heat and transport". On nuclear waste EA goes on to say "...it cannot be assumed that the approach found for the existing stockpile of radioactive waste would be acceptable for waste arising from a new programme. It is a legal requirement that new practices involving radioactive substances are 'justified' i.e. that the benefits outweigh the associated detriments". [2]

[1] Scotsman 14th June 2006 <http://news.scotsman.com/index.cfm?id=872002006>

Evening Standard 20<sup>th</sup> June 2006

[2] Environment Agency response to the DTI Energy Review Consultation

[http://www.environment-agency.gov.uk/ourviews/1159513/1389356/?version=1&lang=\\_e](http://www.environment-agency.gov.uk/ourviews/1159513/1389356/?version=1&lang=_e)

### 4. Sustainable Energy: Tories to outflank Blair?

In ERU6 we reported on significant steps being taken by the Conservative Party away from its traditional support for nuclear power. *The Times* says, far more interesting than what Blair and Brown think on nuclear power is how the Conservatives will respond to the Energy Review, due to be published around mid-July. Will they reluctantly champion new reactors or will they use this as a powerful opportunity to make voters think about them anew, and reinforce their green credentials? The newspaper says the line has not been finally resolved, but there is strong support for the last option. Nuclear contributes only 3.6 per cent of our total energy. The so-called energy review is in fact a review only of electricity generation, and does not address the two thirds of our energy needs that go towards heating and transport. Our huge power stations — whether fuelled by coal, gas or nuclear — are grossly inefficient: they waste two thirds of the energy that they produce. If Britain were to adopt a decentralised form of electricity generation, with much smaller combined heat and power (CHP) stations located in the communities they serve, then the heat produced by the stations could be channelled straight into factories and homes through hot water pipes. Decentralised energy is much cleaner than the current system and it improves energy security, because we don't need to import so much gas.

Labour will certainly be alone in making a strong case for new nuclear stations. And the irony is that, while Blair and Brown think that this is the modern thing to do, they are in fact facing opposition parties with much more forward-thinking policies. *The Times* concludes that Blair is wrong to couple nuclear weapons with the debate about Britain's energy needs. There are much cleaner, cheaper and safer ways to generate electricity than by building new nuclear power stations. [1]

Meanwhile Shadow Trade and Industry Secretary, Alan Duncan, has been speaking at the Renewable Energy Association Annual Conference. He outlined how renewable energy is essential to reducing emissions and securing long-term security of supply. He said exporting renewable technologies could be a great opportunity for our economy, but at the moment Britain is being left behind. [2]

Conservative leader David Cameron told BBC One's 'Sunday AM' on 25<sup>th</sup> June that he advocates a move towards 'far more decentralised energy'. He said the 1930s-style system currently in place does not reflect the needs of a modern age.

[1] Times 23rd June 2006 <http://www.timesonline.co.uk/article/0,,1071-2239097.html>

[2] Conservative Party Press Release 22<sup>nd</sup> June 2006

[http://www.conservatives.com/tile.do?def=news.press.release.page&obj\\_id=130542](http://www.conservatives.com/tile.do?def=news.press.release.page&obj_id=130542)

## **5. When does a carbon price become a hidden subsidy?**

The British nuclear industry will build new nuclear power stations without direct state subsidies so long as the government sets a high price on carbon-polluting electricity, Malcolm Wicks, the energy minister, has said. Carbon pricing will encourage use of all non-carbon electricity sources including renewable energy, and nuclear. His remarks represent the clearest explanation yet of how the government will encourage the huge capital investment required for new reactors. As well as proposing a carbon pricing framework the energy review will also shorten planning procedures, and allow pre-licensing of stations, according to *The Guardian*.

Wicks ruled out direct subsidies, or a guaranteed price for nuclear electricity and he refused any direct help with decommissioning costs. His remarks to the Welsh Affairs Committee suggest the government will commit itself to a framework that sets a long-term price for carbon either through a domestic, EU-wide or eventually wider international trading agreement. [1]

British Energy is the latest utility to claim that nuclear power stations could be economically viable without government subsidy. Its Chief Executive said the cost of replacing ageing nuclear generators was highly competitive compared with funding new gas powered stations, lean coal stations and other technologies, including some sources of renewable power. [2]

*The Independent* called this “an almost laughably optimistic claim - the sort of triumph of hope over experience which has long been the hallmark of this extraordinarily costly form of power generation”. It goes on to argue that although several recent studies have pointed to favourable cost comparisons with other forms of electricity generation but that these studies are mainly self-serving assertions which would never pass muster once the City began to run its slide rule over the assumptions on which they are based. The industry's intention is to get a clear-cut commitment to nuclear out of ministers first. Costs can be debated later. It notes that British Energy insists that the only support that would be necessary would be decent long-term contracts with retail suppliers. These could be commercially negotiated. For obvious reasons, the industry refuses to admit that there is really only one way of ensuring a new generation of privately financed nuclear plants, and that is to place a nuclear obligation on suppliers, similar to the existing renewables obligation, which would force them to source a

proportion of their power from nuclear. This would be a profound interference in the market. [3]

*The Times* asks who is right – those who say nuclear will not require a subsidy or those who say it will? The only honest answer is that nobody can really be sure whether nuclear is independently financially viable or not. British Energy can say that it thinks the nuclear option is viable without fear of contradiction because it makes certain perfectly reasonable assumptions about the prevailing price of electricity and the cost of commissioning and decommissioning a new fleet of nuclear power plants. But it is a judgment, not a fact. The alternative argument is far from unreasonable since there really is no knowing whether a nuclear power plant will prove to be economically viable. There are too many variables. There are also vast periods of time, across which all the variables will change, and change often. [4]

Predicting the direction of government policy over a few weeks is hard enough these days. Guessing what the regulatory landscape might look like three decades from now is best left to the brave or the foolhardy. For this reason alone, Labour's latest conversion to nuclear energy is unlikely to attract private sector investors prepared to put up the necessary billions of pounds without a serious change of style. [5]

Meanwhile, unplanned shutdowns last year at British Energy's nuclear power stations cut the power produced. Essential maintenance work at Hartlepool and Heysham caused "unplanned losses". Despite increasing its pre-tax profits to £846 million last year, its shares fell amid concerns about the shutdowns. [6]

The private sector could not shoulder the full clean-up costs of new nuclear power plants in Britain, potential investors say, casting doubts on government claims this week that new reactors would not need subsidies. The big problem is no-one knows what the full decommissioning costs will be - waste disposal options are still be discussed and research has not begun into the costs, according to engineering firm AMEC. It says the private sector needs a limited liability guarantee. EoN says "*if the sums don't add up we won't do it*". Likely private-sector players say they would support only limited contributions to uncertain decommissioning costs for new plants. [7]

[1] Guardian 14th June 2006 <http://www.guardian.co.uk/guardianpolitics/story/0,,1796922,00.html>

[2] Times 21st June 2006 <http://business.timesonline.co.uk/article/0,,9078-2235388,00.html>

Guardian 21st June 2006 <http://business.guardian.co.uk/story/0,,1802198,00.html>

[3] Independent 21st June 2006 <http://news.independent.co.uk/business/comment/article1093510.ece>

[4] Times 21st June 2006 <http://www.timesonline.co.uk/article/0,,630-2235717.html>

[5] FT 21st June 2006 <http://www.ft.com/cms/s/c364b9b6-00c1-11db-8078-0000779e2340.html>

[6] Scotsman 21st June 2006 <http://news.scotsman.com/index.cfm?id=906632006>

[7] Reuters 19th June 2006

[http://investing.reuters.co.uk/news/newsArticle.aspx?type=reutersEdge&storyID=2006-06-19T083449Z\\_01\\_NOA930686\\_RTRUKOC\\_0\\_ANALYSIS-NUCLEAR.xml](http://investing.reuters.co.uk/news/newsArticle.aspx?type=reutersEdge&storyID=2006-06-19T083449Z_01_NOA930686_RTRUKOC_0_ANALYSIS-NUCLEAR.xml)

## **6. EDM 2412: nuclear waste trains**

MPs are concerned about nuclear waste being transported around the UK's rail network. 33 MPs have signed a new early day motion congratulating Ken Livingstone on undertaking a review of the practice in London.

Recently, an independent review, undertaken nuclear expert John Large, of Large & Associates and commissioned by Greenpeace, of the risks facing the transportation by train of spent nuclear fuel in the UK, showed that these rail transports are hugely vulnerable to a terrorist attack. The review showed that if terrorists were able to damage a spent fuel flask

and then set fire to it in a tunnel, the subsequent release could spread radiation over 100 kilometres, which in an urban area could lead to over 8,000 deaths. At present, local authorities along the nuclear rail routes do not have to prepare any emergency plans or inform the public of what best to do in the event of such an accident or attack.

A new generation of nuclear power stations, currently being considered by the Government, would result in spent fuel, that is more radioactive than current transports, being transported across the UK for the next 100 years.

<http://www.greenpeace.org.uk/climate/climate.cfm?ucidparam=20060329121454>

## **7. Scotland leads dash for renewables.**

Scottish ministers have finally made their submission to Energy Review - two months late. The Scottish Executive reiterated its current opposition to the development of nuclear power "*while waste management issues remain unresolved*". However, the Executive supports extending the operating lives of Scotland's two existing nuclear stations. [1] The Executive also calls for more support for renewables, particularly wave and tidal power, and energy efficiency. Increased backing is also needed for carbon capture and storage in depleted oil and gas fields in the North Sea.

The need to produce lower carbon energy is creating many new business opportunities and green jobs in Scotland, says the Executive. It wants to promote Scotland as a leading location for the development of renewable energy technology, and "invites" the UK to set a more ambitious renewable energy target. Substantial areas relating to energy policy are devolved - such as the promotion of renewable energy and energy efficiency; consents for new electricity generating plant and transmission lines; planning and building regulations; environmental regulation; climate change; fuel poverty and transport. But overall UK energy policy is reserved to Westminster. [2]

The Executive makes several recommendations on energy efficiency including actively promoting the growth of Energy Services Companies - creating market mechanisms that incentivise energy suppliers and consumers to reduce energy consumption in buildings. On security of supply the Executive says local generation of electricity, combined heat and power, and renewable heat should have a role to play in reducing the UK's high reliance on gas for heating, reducing energy costs, and tackling fuel poverty. The Executive therefore invites UK government to examine whether reuse of heat, and encouraging Combined Heat and Power schemes (including regulatory measures) could act as an effective means both of delivering more affordable energy prices to consumers and of helping competitiveness, particularly for energy-intensive industries.

Jack McConnell, the First Minister, faced increased pressure to come clean on his nuclear energy policy before next year's Holyrood elections after a study by the Royal Society of Edinburgh (RSE) called for a more diverse supply of energy, but did not rule out building nuclear power stations. Among its 37 recommendations, the RSE has called on the Executive to develop a comprehensive energy strategy by the end of 2007 - forcing politicians to debate the issue in public before next May's elections. [3]

In fact Jack McConnell appeared to reject nuclear power saying Scotland should lead the dash for renewables. Speaking in Dumfries, Mr McConnell said: "*I am not in favour of new nuclear generation in Scotland until the issue of waste is satisfactorily resolved. Nuclear waste is virtually permanent and potentially very, very lethal, so we should not in Scotland countenance any extension of nuclear power.*" [4]

Blair appeared to step up the pressure on the Scottish Executive to accept new nuclear power stations in the House of Commons when, in response to the Liberal Democrats' Scottish spokeswoman, Jo Swinson, he said: "Scotland has nuclear power stations and a large part of the electricity of the whole country depends on that." [5]

[1] RobEdwards.com 14th June 2006 [http://www.robedwards.com/2006/06/at\\_last\\_a\\_scott.html](http://www.robedwards.com/2006/06/at_last_a_scott.html)

[2] Scottish Executive Response to the UK Energy Review.  
<http://www.scotland.gov.uk/Publications/2006/06/13161455/1>

[3] Scotsman 20th June 2006. <http://news.scotsman.com/scotland.cfm?id=902372006>

Sunday Herald 18th June 2006 <http://www.sundayherald.com/56318>

With added links: [http://www.robedwards.com/2006/06/royal\\_society\\_s.html](http://www.robedwards.com/2006/06/royal_society_s.html)

[4] Herald 21st June 2006 <http://www.theherald.co.uk/politics/64474.html>

[5] Scotsman 22nd June 2006 <http://news.scotsman.com/politics.cfm?id=911562006>

## **8. Terrorism fears over new reactors.**

Roger Brunt, head of the Office of Civil Nuclear Security (OCNS), says Britain's shortage of qualified scientists means constructing new reactors will require an influx of foreign experts. Brunt told MPs that his agency is already struggling with its workload – last year it vetted around 18,000 people. So building new nuclear stations could pose a security threat. [1]

Meanwhile the Civil Nuclear Constabulary's Annual Report reveals that the armed police who guard Britain's civil nuclear plants have been investigated for 45 cases of misconduct and faced 14 formal complaints over the last five years. In one instance, a handgun and ammunition were stolen from a police station. [2]

[1] Terrorism fear over nuclear expansion, by Jason Lewis, Mail on Sunday 25<sup>th</sup> June 2006  
Uncorrected evidence by Mr Roger Brunt, Director and Mr Bryan Reeves, Senior Inspector, Transport, Office for Civil Nuclear Security to the Trade and Industry Committee.

<http://www.publications.parliament.uk/pa/cm200506/cmselect/cmtrdind/uc1122-v/uc112202.htm>

[2] RobEdwards.Com 14th June 2006

[http://www.robedwards.com/2006/06/britains\\_nuclea.html](http://www.robedwards.com/2006/06/britains_nuclea.html)

## **9. Radioactive waste report not a 'green light'**

Gordon MacKerron, chairman of the Government Committee on Radioactive Waste Management (CoRWM) has re-iterated to MPs the committee's view that a decision to build nuclear power stations should be accompanied by a fresh look at how to deal with the waste that new plants would produce, and that the CoRWM report should not be seen as a 'green light' to new reactors.

FT 20th June 2006

<https://registration.ft.com/registration/barrier?referer=&location=http%3A//www.ft.com/cms/s/9c0a206e-fff8-11da-93a0-0000779e2340.html>

Uncorrected evidence by Prof. Gordon MacKerron to the Trade and Industry Committee.

<http://www.publications.parliament.uk/pa/cm200506/cmselect/cmtrdind/uc1122-v/uc112202.htm>

## **10. Electricity is not the same as energy**

The Guardian has been forced, a second time, to correct the assertion that nuclear generation supplies 19% of UK energy. The figure is for electricity alone. This was previously corrected on 2<sup>nd</sup> June. In fact nuclear power only represents 3.6% of the UK's total energy use.

Guardian 16th June 2006

<http://www.guardian.co.uk/corrections/story/0,,1798869,00.html>

## 11. Nuclear Decommissioning Caithness-style

Ambitious plans to regenerate a community in Thurso, Caithness, using renewable energy are to receive financial support from the Nuclear Decommissioning Authority (NDA). £60,000 will be invested over the next three years to help Ormlie Community Association Ltd develop its green energy scheme. It will support the appointment of Thurso engineer, Louise Smith, who also chairs the Caithness Renewable Energy Forum, as project manager. The charitable body set up by residents of a Thurso council estate in 1997 has attracted over £3 million to date to fund improvements to the neighbourhood. The scheme will test six different types of solar energy heating systems in rented houses. This will be followed by plans to harness the wind and convert some of the energy to hydrogen.

UKAEA Press Release 23<sup>rd</sup> May 2006 [http://www.ukaea.org.uk/news/2006/23\\_05\\_06.html](http://www.ukaea.org.uk/news/2006/23_05_06.html)

## 12. Uranium - is there enough?

Michael Meacher says the key issue we need to consider in the Energy Review is whether adequate supplies of uranium are available. He says they are not. [1]

Concerns about energy security are one reason why there have been calls for a new generation of nuclear reactors. But Professor Keith Barnham of Imperial College says high-grade uranium ore is running out. We probably only have enough to run nuclear stations for another 50 years. *"It seems totally foolish to consider building power stations which only have enough fuel for the next two generations when we will be leaving pollution buried in the ground for the next 10,000 or so generations"*. [2]

According to the International Atomic Energy Agency (IAEA) and the Organization for Economic Co-operation and Development (OECD) the total identified amount of conventional uranium stock, which can be mined for less than \$130 per kilo, is about 4.7 million tonnes, which is sufficient, at current demand, for 85 years. [3]

More supplies may, of course, be discovered, but digging uranium out of the ground is an even messier business than mining other ores. After the uranium is extracted from the ore, a toxic sludge, known as tailings, is left behind which remains radioactive for thousands of years. An unpublished survey for the European Union completed in 2002 found over 7000 old mines, dumps, ponds and plants that needed cleaning up in 11 central European countries. [4]

It is not just the environmental problems associated with new mines that we need to consider. The production of electricity by nuclear reactors, as long as rich uranium ores are still available, leads to considerably less CO<sub>2</sub>-emission than does the use of fossil fuels for the purpose. However, as the rich ores become exhausted and poorer and poorer ores are used, continuing use of nuclear reactors for electricity generation will finally result in the production of more CO<sub>2</sub> than if fossil fuels were to be burned directly. [5]

We could of course attempt to use fast reactor technology to lengthen the life of world uranium resources. But this would involve returning to the separation from spent nuclear waste fuel and transport of weapons-useable plutonium with all the attendant security problems that would entail. The United Nations IPCC said the security threat of trying to tackle climate change with a global fast reactor programme "would be colossal" [6]

[1] Guardian 7th June 2006 <http://society.guardian.co.uk/societyguardian/story/0,,1791356,00.html>

[2] The Londoner July 2006 <http://www.london.gov.uk/londoner/06july/p8a.jsp?nav=green>

[3] UN 5th June 2006 <http://www.un.org/apps/news/story.asp?NewsID=18741&Cr=uranium&Cr1=>



[4] Human health may be the cost of a nuclear future, by Rob Edwards, New Scientist 10<sup>th</sup> June 2006  
<http://www.newscientist.com/article.ns?id=mg19025553.700&print=true>

[5] See “Nuclear Power: the Energy Balance” by Jan Willem Storm van Leeuwen and Philip Smith  
<http://www.stormsmith.nl/>

[6] IPCC working group II (1995) Impacts, Adaptions and Mitigation of Climate Change : Scientific-Technical Analyses. Climate Change 1995 IPCC working group II.

### **13. Micropower and the law**

The *Climate Change and Sustainable Energy Bill* has passed its final Parliamentary stage and has now become law. The passage of this Private Members Bill promoted by Labour/Co-op MP Mark Lazarowicz represents a significant boost to the microgeneration industry, and is expected to help bring widespread consumer-based production of sustainable energy closer to reality. The Bill will sweep aside some of the barriers to the uptake of microgeneration and bring in wide ranging policies for its promotion.

*The Climate Change and Sustainable Energy Bill* can be seen at:

<http://www.publications.parliament.uk/pa/ld200506/ldbills/106/2006106.htm>

A briefing outlining the key measures in the Bill can be found at

<http://www.micropower.co.uk/publications/ccsebillmeasures.pdf>

Two MSPs are proposing additional legislation for Scotland. They are:

(1) Sarah Boyack MSP - Energy Efficiency and Micro-generation Bill

[http://www.sarahboyack.net/newsitem\\_Energy%20Savings%20Bill.htm](http://www.sarahboyack.net/newsitem_Energy%20Savings%20Bill.htm)

(2) Shiona Baird MSP - Micropower Generation

[http://www.shionabairdmsp.org/issues/micropower\\_consultation.pdf](http://www.shionabairdmsp.org/issues/micropower_consultation.pdf)