



Energy Review Update Issue 1. **15th March 2006**

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1. Energy crisis remedy unveiled

The UK can meet its targets for cuts in CO₂ emissions without resorting to nuclear power, according to a new report released last week by research agency the World Alliance for Decentralised Energy (WADE). At the report's launch, hosted by The All-Party Intelligent Energy Group, Michael Brown (Director of WADE) and Stephen Tindale (Executive Director of Greenpeace) presented the findings and endorsement came from speakers Peter Ainsworth, Norman Baker and Alan Whitehead

The report, Decentralising UK Energy, compares models of two possible future scenarios: centralised generation using nuclear power, and a decentralised system, in which energy is predominantly produced close to its point of use using renewables and combined heat and power.

Its findings show that the decentralised system would provide the UK with enormous benefits over the nuclear option. Any centralised model is, by definition, vulnerable to massive system failure in the face of an attack or natural catastrophe. It's also extremely inefficient; over 60% of the energy going into a power station (whether fuelled by oil, gas, coal or nuclear) is wasted as heat, while another 3.5% is lost as the electricity travels round the national grid. So all in all, over two-thirds of all energy going into a power station is wasted.

Overall, WADE reports that the decentralised solution is far superior, being:

- cleaner - CO₂ emissions are 17% lower than in the nuclear scenario.
- cheaper - overall capital costs are over £1 billion lower than in the nuclear scenario and the retail costs of electricity to the end user are lower too. The model doesn't include the cost of managing nuclear waste, so in reality the cost advantage will be much greater than the £1bn. Recent estimates of the existing nuclear waste cost are as high as £70 billion.
- more secure - UK gas consumption is 14% lower than in the nuclear scenario.

Visit www.greenpeace.org.uk/wade to read the report.

2. Waste report must not be seen as 'green light' to new reactors

The chair of the Committee on Radioactive Waste Management (CoRWM), Gordon MacKerron, says the Committee's report, expected in July 2006, should not be seen as a green light to new nuclear reactors. [1]

CoRWM has previously stressed that its findings will not mean the issue is solved. Its July report will make recommendations on nuclear waste management options, but this will only be the start of seeking a solution. [2] CoRWM envisages a lengthy, three-stage process of deciding on a storage method, setting out a clear implementation plan, and then arguably the most difficult resolving issues of public confidence.

The nuclear industry claims a new generation of reactors will add only 10% to the volume of radioactive waste. But this is misleading because the majority of existing waste is made up of bulky, lower-level waste. The volume is not the whole story, we also need to know the type of waste. [3] CoRWM's latest Radioactive Waste Inventory estimates existing reactors will produce three times the amount of high-level waste and spent fuel created by the past 60 years of nuclear power. [4] It will increase the amount of radioactivity held in all nuclear wastes by an additional 150%.

[1] "Tackling the UK's Nuclear Legacy" by Tim Hirsch, BBC 14th Feb 2006, <http://news.bbc.co.uk/1/hi/sci/tech/4700106.stm>

[2] CoRWM's Draft Report for January 2006 Plenary. 5th Jan 2006, <http://www.corwm.org.uk/pdf/0700.2%20-%20Final%20report%20-%20draft%20for%20January%202006%20plenary.pdf>

[3] Ministers warned of huge rise in nuclear waste, by David Adam, Guardian, 9th January 2006. <http://www.guardian.co.uk/frontpage/story/0,16518,1682244,00.html>

[4] CoRWM's Radioactive Waste and Materials Inventory July 2005. <http://www.corwm.org.uk/content-728>

3. Government advisers - nuclear power is not the solution to climate change.

Nuclear power is not the answer to tackling climate change or security of supply, according to the Sustainable Development Commission. Even if the UK's existing nuclear capacity is doubled, it would only give an 8% cut on CO2 emissions by 2035 (and nothing before 2010). This must be set against the risks. [1]

Kevin Anderson, a senior research fellow at the Tyndall Centre for Climate Change Research agrees that new reactors would do little to combat climate change. He says: "*we can easily deal with climate change without nuclear power ... If you've got money to spend on tackling climate change then you don't spend it on supply. You spend it on reducing demand.*" Wider use of energy efficiency measures such as house insulation and fuel-efficient cars could almost halve energy demand. [2]

Nuclear power is a dangerous distraction because it is much less cost effective at cutting carbon emissions than energy efficiency or renewables. Promoting new reactor construction would divert resources and consequently have a negative impact on the UK's efforts to tackle climate change. [3]

The policies set out in the 2003 Energy White Paper have had little time to start taking effect let alone reveal their long-term potential. [4] Constantly re-examining energy policy creates uncertainty for potential investors and could stifle all investment in anything. Dr Catherine Mitchell, a member of the last Energy Review team, says what we need to do is implement the recommendations of the last White Paper on energy efficiency and renewables. [5]

[1] "The role of nuclear power in a low carbon economy" Sustainable Development Commission, March 2006. <http://www.sd-commission.org.uk/pages/060306.html>

[2] "Nuclear power cannot tackle climate change", by David Adam, Guardian 17th January 2006, <http://www.guardian.co.uk/science/story/0,1688034,00.html>

[3] "Nuclear power, economics and climate protection potential", by Amory Lovins, Rocky Mountain Institute, September 2005 www.rmi.org/sitepages/pid171.php#E05-08

and "More Profit with Less Carbon", by Amory Lovins, Scientific American, September 2005, <http://www.sciam.com/media/pdf/Lovinsforweb.pdf>

[4] "Energy experts say Government Energy Review risks asking the wrong questions" Sussex Energy Group Press Release 24th January 2006.

<http://www.sussex.ac.uk/spru/1-4-7-5-6.html>

[5] Evidence by Warwick Business School to the House of Commons Environmental Audit Committee's investigation on "Keeping the Lights On: Nuclear, Renewables and Climate Change" 19th October 2005.

<http://www.publications.parliament.uk/pa/cm200506/cmselect/cmenvaud/uc584-i/uc58402.htm>

4. Tories support decentralised energy to combat climate change

Last week the Conservative Environment team, made a key submission to the Conservative Quality of Life Policy Group on the potential of decentralised power. David Cameron commented:

"Achieving a sustainable world and combating the threat of climate change will require some really fresh ideas and radical thinking. We cannot expect to meet the challenges of this century by toying with the structures and technologies we have inherited from the past, and the concept of Decentralised Energy should to be taken seriously."

The submission will be made in the form of a letter signed by the Shadow Environment spokesmen and will also be submitted for consideration by the Conservative Energy Review.

Praise for this move came from Greenpeace, Friends of the Earth and the Micropower Council.

5. Nuclear power - creating opportunities for terrorism

Building new nuclear reactors will present a major threat to our national and international security and increase the risk of nuclear terrorism, according to evidence presented to the House of Commons Environmental Audit Committee by the Oxford Research Group. Nuclear power should, therefore, not be part of the UK's energy supply. [1]

The 9/11 attacks alerted the world to the potential of nuclear terrorism and recent events have all served to heighten concerns: (a) suspicions that terrorists in Australia were planning to target the Sydney reactor; (b) a foiled Chechen plot to crash airplanes into a Russian reactor; (c) plans of Britain's most sensitive nuclear sites found in a car linked to a London terror suspect after the July 2005 London bombing campaign. [2]

An attack on a nuclear facility could have widespread and catastrophic consequences for both the environment and public health. Greenpeace released a short video in January to alert the public to the dangers presented by the possibility of a new reactor building programme. See:

<http://www.greenpeace.org.uk/fridaythe13th/>

[1] Secure Energy: Options for A Safer World. Oxford Research Group. 2005

<http://www.oxfordresearchgroup.org.uk/programmes/nuclearissues/secureenergy.htm>

[2] See <http://www.greenpeace.org.uk/fridaythe13th/facts.htm>

6. Gas imports – there's no threat to security of supply

The idea that building more nuclear reactors will make our energy supplies more secure than if we import gas has been attacked by Professor Jonathan Stern, director of gas research at the Oxford Institute for Energy Studies. Stern believes that importing gas is likely to be a more secure option than relying on nuclear power which is not cheap or reliable. Russia has never defaulted on gas supplies, and it is not in its interest to do so. In any case, the UK is not likely to depend on Russian gas in the foreseeable future. Imports for the next decade or so are likely to come from Norway, Belgium and the Netherlands. The UK is also investing over £6 billion in facilities to import gas and significantly increase storage capacity for future imports from the Middle East, Central Asia, Africa and Latin America.

If the UK is serious about gas security it should act to use gas much more efficiently, particularly the 30% or so of supplies burnt to generate electricity. Rather than burning it wastefully in big power stations, it should be used in local power stations, which also generate hot water to be used for district heating. These combined heat and power plants could slash the need for gas. [1]

The Government originally set a target for Combined Heat and Power of 5 GW by 2000. This target was missed, and was only reached in 2005. Government also set a target of doubling of CHP capacity to 10 GW by 2010. With the right measures in place, this target could still be achieved. A further 4.5 GW would be required by 2010 – the equivalent of effectively displacing one nuclear power plant per year. [2]

[1] “Over a barrel” by Rob Edwards, Sunday Herald 8th January 2006

<http://www.sundayherald.com/53456>

[2] See “50 ways to boost CHP” CHP Association 27th June 2005

http://www.chpa.org.uk/news_downloads/2005/50%20ways%20to%20boost%20CHP%20CHPA%20PRESS%20RELEASE%20%20June%202005.pdf

7. Decommissioning problems continue to pile up

Sellafield’s THORP spent nuclear fuel reprocessing plant, which closed in April 2005 following a major spillage of highly radioactive liquid, is unlikely to re-start before the Autumn at the earliest. British Nuclear Group (BNG), which operates THORP on behalf of the Nuclear Decommissioning Authority (NDA), has yet to submit a plan for repair to the Nuclear Installations Inspectorate (NII). [1]

The industry believes that it must be able to demonstrate an ability to decommission and dismantle existing nuclear power stations and manage existing waste safely if it is to have any hope of the public accepting the idea of new reactors. [2] Unfortunately, the way the NDA was set up has left it reliant on income from THORP for some of its decommissioning funding.

The projected cost of cleaning up the nuclear sites for which the NDA is responsible is likely to leap to more than £70bn when new figures are published later this year. The NDA’s initial estimate of £56bn was itself the equivalent of a charge of £800 for every adult and child in the country. And this does not include the cost of cleaning up British Energy sites. [3]

One particular spent fuel storage pond at Sellafield has proved to be an intractable problem, and has now received yet another warning from the European Commission. The Commission says it has breached rules designed to keep tabs on nuclear materials to stop them being diverted illegally for non-peaceful uses. The 50-year-old Magnox storage pond has inadequate records so the amount of plutonium can only be estimated. European safety inspectors have complained they cannot get proper access to the site, because radiation exposure rates are so high that time spent on the plant is restricted to less than an hour a day for individual workers. [4]

[1] “THORP facing further delay to re-start”, Cumbrians Opposed to a Radioactive Environment Press Release 30th January 2006. <http://www.corecumbria.co.uk/>

[2] “Speedier, cheaper clean-up raises prospects of nuclear energy” by Mark Milner, Guardian 12th October 2004. <http://society.guardian.co.uk/environment/news/0,14129,1325166,00.html>

[3] “Cost of cleaning up after nuclear power stations are closed down rises to £70bn” by Andy McSmith, Independent 3rd January 2006 <http://news.independent.co.uk/environment/article336256.ece>

[4] “American engineers in line for jobs until 2080 on Britain’s nuclear clean-up” by Terry Macalister, Guardian 16th February 2006 <http://politics.guardian.co.uk/economics/story/0,,1710892,00.html>

See also http://weblog.greenpeace.org/nuclearfacts/archives/2006/02/sellafield_brea.html - more

8. British Energy – output down; Government subsidy up £1bn, expenditure on security increases

British Energy's (BE) nuclear output in the third quarter to 1st January 2006 was 13.3 terawatt-hours (TWh) down from 14.0 TWh for the same period last year. This was mainly due to unplanned outages at Heysham 1 and Hartlepool. [1]

The potential bill facing the government for cleaning up British Energy's nuclear liabilities has risen by almost £1bn to more than £5bn. The latest of a series of five-yearly reviews of BE's uncontracted liabilities and decommissioning costs shows they increased by £956m to £5.3bn, mainly as a result higher decommissioning costs. Under British Energy's restructuring plan completed last year, the government agreed to indemnify the company against any shortfall in the nuclear liabilities fund which meets the clean up costs. In return British Energy contributes 65% of its net cash flow to the fund. The increased liabilities will not mean the company will have to pay more to the fund. [2]

British Energy acknowledged that unplanned shutdowns and loss of generating capacity lead to higher costs. So far this year the Company has invested £170m in its plant and is planning to increase that to up to £300m for next year, a programme which it hopes will cut unexpected shutdowns. The company also warned it will have to spend millions on extra security guards and insurance following the introduction of new anti terror laws.

[1] British Energy Report on nine months to 1st January 2006
http://www.british-energy.com/documents/SEA_Q306-Final_-_RNS.pdf

[2] Guardian 25th February 2006
<http://politics.guardian.co.uk/publicservices/story/0,,1717544.00.html>

9. A Scottish week in the life of the energy review

Energy Minister, Malcolm Wicks, travelled by plane to Edinburgh for an Energy Review consultation meeting at the end of February. He was quoted in *The Scotsman* as saying that Scotland should 'grow up' and accept the possibility of new nuclear power stations, [1], a remark he wrote denying he had made. [2] But he also strained relations within the Scottish Executive coalition by appearing to brand Scottish Liberal Democrats, who oppose nuclear power, as "environmental fundamentalists". Wicks, who toured a wave power project in Fife, made clear that he doesn't think renewables and energy efficiency will be enough to meet our climate change objectives.

Labour's Scottish conference backed seemingly contradictory resolutions on nuclear power in Aviemore at the week-end. [3] The first resolution sponsored by Amicus and the NUM said the government must "support the fact that immediate plans must be started to replace or renew our existing coal-fired and nuclear generating stations where required". The second resolution, which was put forward by the Socialist Environment Resources Association and supported by the Co-op Party, was passed unanimously, unlike the first. It recognised "the concerns about nuclear waste, acknowledging that all forms of energy have a carbon footprint and that uranium is not a renewable resource". Mary Lockhart of the Co-op Party, which is supporting Mark Lazarowicz MP's Private Members Bill on Climate Change and Sustainable Energy, spoke about the opportunities presented by small-scale renewable energy and microgeneration.

[1] Scotsman 23rd Feb 2006
<http://thescotzman.scotsman.com/index.cfm?id=277762006>

BBC 23rd Feb 2006
<http://news.bbc.co.uk/1/hi/scotland/4743226.stm>

[2] Scotsman 27th Feb 2006
<http://thescotzman.scotsman.com/letters.cfm?id=299362006>

[3] Scottish Herald 27th Feb 2006
<http://www.theherald.co.uk/politics/56984.html>

10. Public money used to subsidise union lobby on new build

Controversy has arisen over the activities of the group of trade unionists campaigning for nuclear power under the banner of Nuklear21. The group, which includes Amicus, is planning a mass lobby of Westminster on 29th March. The Scottish Sunday Herald has revealed that Nuklear21 has been given support by the state-owned company British Nuclear Group (BNG), part of BNFL. It says BNG has admitted that it had been paying “travel and business expenses” for Nuklear21 union representatives since April 2005, as well as paid time off and “administrative support facilities” such as offices and communication systems. [1]

[1] Sunday Herald, 5th March 2006
<http://www.sundayherald.com/54448>