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1. Justifying the Unjustifiable

> "The loss of even one human life or the malformation of even one baby …should be of concern to us all. Our children and grandchildren are not merely statistics towards which we can be indifferent." President John F Kennedy (1963) talking about radiation exposures from nuclear tests. [Radiation Free Lakeland Submission]

NuClear News No.13 looked at some of the issues raised by the Government's consultation on the justification of new reactor types. (1) Here we look at highlights from some of the submissions to the consultation.

John Urquhart, the statistician who worked on the 1983 Yorkshire TV documentary – Windscale the Nuclear Laundry discusses the high level of uncertainty surrounding health and safety issues. The justification process provides a useful beginning to resolving these uncertainties but without a subsequent public inquiry any findings based on exchange of documents may prove to be of little value with serious consequences for future generations.

The Shut Down Sizewell Campaign calls the Justification Consultation a "…bogus attempt at consultation." Along with the Nuclear Free Authorities and several others, the group complains about the fact that the analysis by the Committee on Medical Aspects of Radiation in the Environment (COMARE) for the Government of the German KiKK study on childhood cancers will not be available until after the Justification consultation has closed, and the Government has refused requests to extend its deadline for comments until the COMARE report is finished.

Radiation Free Lakeland (RFL) says to justify the anticipated radiation exposures the Government should set out what the anticipated levels of radionuclide emissions are likely to be, estimate the doses and then discuss their adverse health effects. These should then be assesses in the light of any benefits of new reactors. Unfortunately, the consultation documents do not do this. Greenpeace (2) agrees. It points out that the Department of Energy and Climate Change (DECC) put a statement on its website in February 2010 which said that the Nuclear Industry Association (NIA) had confirmed the new reactor-types would be capable of meeting a dose constraint for members of the public of 0.15 mSv per year and this includes spent fuel interim storage facilities and waste conditioning and encapsulation plants. But there is no indication of how the NIA has worked this out. There is no attempt to quantify radiation doses let alone the health detriment. Yet in seeking to justify new build the consultation relies heavily on highlighting the disadvantages of fossil fuel, but does not open up for examination the detriments and advantages of nuclear power versus those of renewable energy or efficiency measures.

The Government could attempt to "justify" future leukaemia deaths by using some sort of Cost-Benefit Analysis. The Secretary of State has previously considered justification to require a full cost-benefit analysis and carried out a full financial quantification when determining whether the manufacture of MOX fuel could be justified. But placing a monetary value on child deaths and comparing that with the value of any economic and social benefits would be an ethically dubious procedure, to say the least, says RFL. But, in the absence of any cost-benefit analysis, it is difficult, if not impossible, to see how the likely deaths from leukaemia of children living near new reactors could be "justified". Instead the Government appears to have adopted the strategy of denying or minimising the significance of the studies showing increased leukaemias. Greenpeace says the Secretary of State has failed to properly conduct the balancing exercise required by the European Directive, and it has failed to properly quantify the radiological health detriments and safety and security implications of the practices.

The KiKK study is presently the subject of intense research and discussion throughout the world, including at least three studies in the UK. The Government has pointed to two recent epidemiology studies [Laurier et al, 2008 and Bithell et al, 2008] which come to different conclusions from the KiKK study and which support the Government's apparent view that there are no cancer increases near nuclear stations. Both studies actually showed small increases in child leukaemias, but their numbers were low and lacked "statistical significance". Low significance should not be interpreted as though it measures the probability of effect – the absence of evidence is not evidence of absence. The Bithell et al study has been criticised for its weak design. Unfortunately, the ongoing COMARE study due to be published in the summer of 2010 will apparently suffer from exactly the same faults as the Bithell study. It is merely an update of the 2008 Bithell et al study.

Dr Ian Fairlie, who was a member of the Secretariat for the Government's Committee Examining Radiation Risks of Internal Emitters (CERRIE) told The Guardian: "In my view, the KiKK report is a showstopper for the government's plans for more nuclear power stations. It's impossible to justify killing children near nuclear power plants: there are many safer ways to generate electricity." (3)

The Nuclear Free Local Authorities (4) (NFLA) point out that the public dose constraint cited by the Nuclear Industry Association (0.15 mSv per year) is inadequate. Although cited by the Health Protection Agency (HPA) in 2008, it is 50% more lax than the 0.1 mSv dose constraint recommended by the International Commission on Radiological Protection (ICRP) in its latest recommendations in 2007. In NFLA's view, the ICRP's more precautionary 0.1 mSv constraint should be used.

Greenpeace says it's not clear what each new practice would entail - does it include spent fuel stores on-site, encapsulation plants, and a geological disposal facility? The last two are totally untried in this country. It is not clear whether Justification of new reactors also justifies 'disposal'. Does this override any element of 'voluntarism' or the regulatory process? Information on exactly where, when and how some stages of the practice might take place is entirely absent, so prevents anyone making an accurate prediction of the potential radiation doses and detriments with any certainty. Yet the consultation documents give the impression that all of these matters are settled. Greenpeace takes particular issue with the statement:

"…that the encapsulation, transport and emplacement of high burn-up spent fuel can be shown to be feasible using existing technology." (5)

The Justification document does not rule out central storage for spent fuel, but the possibility is not explored and nor are the implications for the location of a waste encapsulation plant. Reprocessing is not discussed even though it has not been completely ruled out by the industry. A key question which remains unanswered is when the Government plans to take title and liability for the spent fuel – will it be before or after encapsulation for example. The use of plutonium (MoX) fuel is not explored, despite the fact that the application states that both reactor-types are capable of using it. There is no consideration of the potential need for a second geological disposal facility, either for technical reasons or because of the size of the new reactor programme.

The consultation claims vulnerability to terrorist attack is reduced because the reactor-types are "the most robust civil structures in the world, and have a multi-layered defence." (7)

But this does not square with the Regulatory Position Statement release by the Health and Safety Executive in February. (8) Greenpeace says it is no more than an optimistic claim which should not be presented as fact until the Generic Design Assessment (GDA) has been completed. This underlines the pre-emptive nature of the Justification consultation. Even though the HSE has expressed "significant concerns" in its 3rd Stage GDA reports and would not currently pass either of the proposed practices for construction based on present submissions, the government believes them to be justified because the GDA process itself is in place. There is no attempt to assess the economic impact of an accident or terrorist attack. The consultation fails to address problems envisaged with the possible uninsurability of certain impacts of an accident (and terrorist attacks) under the new liability regime.

The Welsh Anti-Nuclear Alliance (WANA) remind us that in March 2007 the International Atomic Energy Agency warned that Britain must not go ahead with a new generation of nuclear power stations until it has a "clear and robust" plan in place for dealing with decommissioning and waste treatment. The documents are entirely unconvincing about how the public and workers are to be protected from accidents and deliberate attacks on the spent nuclear fuel stored on each site for up to 160 years. No consideration is given to the deterioration of high burn-up spent fuel or the means by which it would be retrieved for conditioning or disposal.

High burn-up spent fuel will be twice as hot and twice as radioactive as spent fuel from Sizewell B. It will require twice as long to cool down before disposal. The cost of managing this spent fuel will long outlast any benefits, in effect transferring burdens to future generations. One of the Government's key propositions is the claim that 'based on scientific consensus and international experience' high burn-up spent fuel doesn't require different solutions. (8) The reality is, based on IAEA and US Nuclear Regulatory Commission documents, that there is very little experience with managing very high burn-up spent fuel, and there are some scientific and technical uncertainties about the characteristics of high burn-up spent fuel which require separate and intense scrutiny. Neutron radiation from high burn-up spent fuel would become significant over the 100 years in which it must be cooled. Deterioration of high burn-up fuel elements after 100 years of storage means more failed fuel elements and higher radiation exposures for future generations attempting to retrieve such material, thus transfering 'burdens of cost, effort and worker radiation dose' to the future generations but no benefit from the proposed reactors.

WANA says the NDA's assessment of the disposability of spent fuel from new reactors concludes that after 100 years cooling, it may be disposed of in the same repository as 'legacy' spent fuel because its additional footprint will be small relative to that of the legacy waste repository. This is unrealistic. New reactor spent fuel is liable to double the footprint of the geological repository, and require it to remain in operation for a century longer than it would need to without a new reactor programme.

Blackwater Against New Nuclear Group (BANNG) says it does not regard the public consultation and decision-making on Justification to have been open and transparent. The public consultation has been inadequate and unfair. The decision making appears predetermined. Given his open promotion of nuclear power, the Secretary of State cannot be regarded as a disinterested arbiter on whether or not new nuclear build goes ahead and his role as Justifying Authority thereby undermines public confidence in a fair outcome. BANNG believes it is in the public interest that the process of Justification is opened up to wide-ranging and independent debate. BANNG reaffirms its call for an inquiry to be held as provided for in the regulations.

(1) NuClear News No.13, December 2009.
http://www.no2nuclearpower.org.uk/nuclearnews/NuClearNewsNo13.pdf

(2) Greenpeace submission available at:
http://www.greenpeace.org.uk/media/reports/greenpeace-submission-proposed-regulatory-justification-decisions-new-nuclear-power-stations-consultation-document

(3)Guardian 7th March 2010
http://www.guardian.co.uk/business/2010/mar/07/bnfl-director-book-sellafield-cancer-concerns

(4) NFLA submission available at: http://www.nuclearpolicy.info/docs/consultations/NFLA_Justification_response_090210.pdf

(5) The Justification of Practices Involving Ionising Radiation Regulations 2004: Consultation on the Secretary of State's Proposed Decisions as Justifying Authority on the Regulatory Justification of the New Nuclear Power Stations Designs currently known as the AP1000 and the EPR. Volume 2 AP1000, DECC November 2009 para 4.133
http://www.decc.gov.uk/Media/viewfile.ashx?FilePath=Consultations\proposedregulatoryjustificationdecisionsnewnuclearpowerstations\1_20091203103124_e_@@_justificationpracticescondocvol2.pdf&filetype=4

(6) Paragraph 6.9 of Volume 2

(7) UK Regulatory Position Statement on the Westinghouse AP1000.
http://www.hse.gov.uk/newreactors/position-statement-westinghouse.pdf

HSE 16th Feb 2010
http://news.hse.gov.uk/2010/02/16/hse-raise-regulatory-issue-ri-against-westinghouses-ap1000-nuclear-reactor-design/?rss

(8) The draft Nuclear National Policy Statement Para 3.8.10

2. National Policy Statements (NPSs)

Consultation on the energy NPSs ended on February 22nd after more than 3,300 people attended 23 events in England and Wales, almost 20,000 visited the consultation website and more than 1,000 organisations and individuals responded to the consultation. (1)

DECC would like to adopt the NPSs by the summer recess, according to the ENDS Report. (2) However, the Law Society has outlined concerns about the NPSs. David Brock, chairman of the society's Planning and Environmental Law Committee said there was "a real risk of judicial review" because of lack of public consultation on the draft nuclear NPS. The Planning and Environment Bar Association also questioned the process in evidence to the Energy and Climate Change Committee.

The Law Society's Planning & Environmental Law Committee says decisions of the Infrastructure Planning Commission [IPC] must be taken in accordance with the NPSs unless that would be unlawful or the adverse impacts outweigh the benefits. The Law Society has always made it clear that it believes this creates a democratic deficit, because this body is not accountable directly to the public. Once a location has been identified in an NPS as appropriate for a nuclear reactor, there will be little opportunity for the local community or other objectors to challenge the suitability of the site for nuclear development.

Environmental campaigners have repeatedly warned the NPS consultation process is seriously flawed. DECC has already been forced to hold extra public meetings at Hartlepool and Hinkley Point due to short notice of the first meetings. The Hartlepool local event began three days after the NPSs were published.

The government has also breached its own rules on consultation as spelt out in the Planning Act 2008. A freedom of information request by Planning magazine revealed that only 20 out of the 110 councils that should have been consulted were involved in the discussions. (3) Colchester Borough Council is one of the nearly 90 authorities that were not consulted on the publicity requirements for the consultation as required under the Planning Act (2008). (4) Planning Magazine says this is likely to be the basis of any legal challenge. Colchester's submission to the NPS consultation said that a new reactor at Bradwell would be a mistake. (5). Lawyers Bircham, Dyson and Bell told Planning that Colchester's submission would strengthen the case for any legal challenge. West Mersea Town Council has also objected to Bradwell's nomination and South Gloucestershire Council is opposing Oldbury on the grounds that the risk of flooding has been underestimated. (6)

The National Trust has objected to the proposed nuclear stations in West Cumbria. They have announced that in their view the National Policy Statement on Nuclear is 'not fit for purpose.' Serious reservations have been expressed about new build at Sellafield and they say that Braystones and Kirksanton should be removed from the list. The Trust is a significant landowner in the Lake District National Park. In a report the Trust says it is very concerned about this proposal particularly in relation to the inevitability of impacts on landscape and on likely impacts of transmission lines needed to connect the site. (7)

As you might expect, Greenpeace's submission to the NPS consultation (8) says nuclear power is dangerous because of the intractable problems of radioactive waste and nuclear weapons proliferation. But there is another danger: the danger of distraction. The overall emphasis of the Energy NPSs is skewed in such a way as to paint new nuclear in an overly positive manner, to the detriment of alternative renewable technologies. For instance, there are 39 references to the term "employment" in the nuclear NPS (9) but no references to the same term in the renewable NPS. (10) The nuclear NPS also consistently refers to "energy" and conflates this with "electricity", giving a further misleading appraisal of the potential for new nuclear.

There is a need for a large scale new renewables programme (to meet EU legislation, UK targets and for the UK to decarbonise) and there should be safeguards, frameworks and clear timelines established to ensure that the case for renewable energy investment is not compromised by the approval of a large number of non-renewable energy sources. Indeed, the Pöyry report on the 'Implications of the UK meeting its 2020 renewable energy target' finds that, if the UK is able to achieve its target and delivers on its own action plan to reduce demand through energy efficiency, then major new power stations would not be needed to ensure that Britain can meet its electricity requirements up to at least 2020. (11)

Greenpeace highlight the fact that the regulations and statutory guidance on Funded Decommissioning Programmes (FDP) and the Fixed Unit Price (FUP) are not finalised and will not be until late 2010 and mid-2010 respectively, if then. The FDP and FUP is the process by which the Secretary of State will sign off on plans for site decommissioning and spent fuel storage and disposal.

The current basis for the initial fixed unit price for geological disposal is that it will be co-disposed with legacy wastes. The timing of deciding on both an FDP and FUP, and agreeing this with reactor operators appears to conflict with that of other key processes that need to be determined before the FUP can be decided. A recently published timeline shows the FDP will be finalised the same time as the first site license is agreed (immediately after the GDA process ends) and when planning is granted. (12) So the IPC, local communities and local authorities won't know what the waste plans until after the planning process has been completed.

(1) DECC Press Release 22nd February 2010
http://www.decc.gov.uk/en/content/cms/news/pn10_032/pn10_032.aspx

(2) ENDS Report 421, February 2010
http://www.endsreport.com/index.cfm?action=report.article&articleID=21906

(3) See NuClear News No.15 February 2010
http://www.no2nuclearpower.org.uk/nuclearnews/NuClearNewsNo15.pdf

(4) Planning Magazine 5th March 2010
http://www.planningresource.co.uk/news/ByDiscipline/Policy/login/987822/

(5) Chelmsford Weekly News 24th February 2010
http://www.chelmsfordweeklynews.co.uk/news/colchester/5025891.Don___t_build_new_Bradwell_plant__say_councillors/

(6) Guardian 22nd Feb 2010
http://www.guardian.co.uk/business/2010/feb/22/bradwell-oldbury-reactors-opposition

(7) Get Noticed Online 7th March 2010
http://www.getnoticedonline.co.uk/news/general-news/national-trust-slam-nuclear-new-build.html

(8) Greenpeace's submission to the NPS consultation is available here:
http://www.greenpeace.org.uk/files/pdfs/nuclear/GPUKNPSConsultationResponse.pdf

(9) http://data.energynpsconsultation.decc.gov.uk/documents/npss/EN-6.pdf

(10) http://data.energynpsconsultation.decc.gov.uk/documents/npss/EN-3.pdf

(11) http://www.ilexenergy.com/pages/Documents/Reports/Renewables/July08_2020RenewablesTarget.pdf

(12) Mark Higson, chief executive, office for nuclear development, DECC, Presentation to Westminster Energy and Transport Forum, 12th Nov 2009

3. Nuclear Costs

Time Magazine says Obama's nuclear bet won't pay off. (1) You only have to look the Vogtle power plant outside Atlanta to be reminded of the insanity of nuclear economics. The plant's original cost estimate was less than $1 billion for four reactors. Its eventual price tag in 1989 was nearly $9 billion, for only two reactors. The Southern Co. is finally trying to build the other two reactors at an estimated cost of $14 billion. That's why no Wall Street moneyman in his right mind would finance a new reactor. But President Obama has located an alternative financier: the American taxpayer.

In mid-February Obama announced an $8.33 billion loan guarantee for the new Vogtle reactors, the first step in the Administration's push to jump-start the nuclear construction industry, and he is urging Congress to triple the budget for nuclear loan guarantees. But despite the prospect of new taxpayer guarantees — and the cradle-to-grave subsidies that already support this 50-year-old industry at the federal and state level — utilities keep scrapping or delaying plans for new reactors.

Nuclear costs keep spiraling out of control. Last year, the estimates for several reactors doubled, and for one Pennsylvania reactor more than tripled. This is why credit-rating agencies keep downgrading utilities with nuclear ambitions, which increases their borrowing costs and makes their projects even more expensive. Even with the federal guarantees, the new reactors at Vogtle are expected to boost local electricity bills by 9% — and like most nuke-friendly states, Georgia has enacted a law ensuring that ratepayers won't get their money back if the utility fails to complete the plant.

Speaking at the Nuclear Industries Association conference on nuclear new-build at the beginning of March, EDF and Horizon called on the UK government, yet again, to set up a mechanism to support the carbon price, saying that without such a mechanism all low-carbon investment was at risk. (2)

EDF Energy's Humphrey Cadoux-Hudson said of the EU's emissions trading scheme (ETS), which is designed to produce a carbon price, that it was "not possible to leave some things at the mercy of a poorly-defined market". He

said: “With the carbon price so low the signal for low-carbon energy investment is compromised. Now is the time to act”, adding that EDF’s preferred solution was a carbon price floor. He said he could, “See no reason why the government should not act unilaterally”. Alan Raymant, chief executive of Horizon, a joint venture of RWE and Eon that aims to build nuclear reactors at Oldbury and Wylfa, agreed.

Energy Minister David Kidney told the Conference that measures to drive up the price of carbon will be revealed in the forthcoming budget. Kidney said the ETS would remain the primary tool for determining the price of carbon. “In the Budget we will reveal the findings of an ‘emerging energy findings assessment,” he said.

(1) Time Magazine 18th Feb 2010
http://www.time.com/time/politics/article/0,8599,1964846,00.html
See also Mother Jones 8th March 2010
http://motherjones.com/politics/2010/03/obama-nuclear-loan-guarantee
(2) Utility Week 4th Mar 2010
http://www.utilityweek.co.uk/news/uk/electricity/nuclear-new-build-needs-carbon.php
(3) New Civil Engineer 2nd March 2010
http://www.nce.co.uk/5214923.article

4. Generic Design Assessment

The Nuclear Installations Inspectorate (NII) has warned Westinghouse it is still not saisfied with the robustness of the concrete reinforcements in its AP1000 reactor design. Westinghouse will need to demonstrate it is strong enough to resist aircraft impact and other hazards. In early February Westinghouse was forced to put back the start of building work at two new reactors in Florida for up to three years due “licensing issues”. (1) Westinghouse is planning to “sandwich” concrete between two plates of steel, rather than using conventional reinforcement techniques. It says the method is commonplace in Japan and other Asian countries. This will save time during the very lengthy construction process and the company claims it will result in a higher quality product.

The concern is that this may mean the structure is not strong enough to withstand a direct hit from a commercial airliner, so the design could be vulnerable to terrorist attacks. The NII raised its concerns in an official letter, which insisted that Toshiba-Westinghouse provide fresh evidence that the design was sufficiently strong to withstand “external shocks” before it could be considered for a UK licence. (2)

Last October, federal regulators in the US discovered significant safety concerns in the AP1000 design. The Nuclear Regulatory Commission (NRC) rejected the reactor after determining that the shield design would not protect the reactor from earthquakes, tornadoes, hurricanes, and airplane crashes. Michael Johnson, director of the NRC’s Office of New Reactors, noted that the agency had “consistently laid out our questions” to Westinghouse about the design, which did not yet meet “fundamental engineering standards.”

Westinghouse says it will submit a new design this month. But it’s unclear when the NRC will get around to reviewing it. Since the first reactors to receive a government loan guarantee were supposed to be AP1000s, the US nuclear industry finds itself in an absurd situation. “It’s ludicrous they would be handing out a loan guarantee for a reactor design that’s been delayed so much, and there’s no review schedule now,” says Tom Clements, southeast regional nuclear coordinator for Friends of the Earth. “We don’t even know if it can be licensed.” (3)

Meanwhile the French Network for Nuclear Phase-out (Réseau “Sortir du nucléaire”) has released a series of confidential documents disclosed by an anonymous insider from EDF, which show that the EPR design presents a serious risk of a major nuclear accident - a risk deliberately taken by EDF to increase its profitability. Because it is potentially vulnerable to a situation which could have uncontrollable consequences, the EPR reactor is extremely dangerous. (4)

“Sortir du nucléaire” has set up a group of experts to analyse the documents thoroughly. It says defects in the mechanism that controls the nuclear reaction could cause an explosion of Chernobyl proportions. (5)

(1) Telegraph 16th February 2010
http://www.telegraph.co.uk/finance/newsbysector/energy/7251538/Westinghouse-warned-over-nuclear-reactor-design.html

(2) Times 17th February 2010
http://business.timesonline.co.uk/tol/business/industry_sectors/utilities/article7029697.ece

See also HSE 16th February 2010
http://news.hse.gov.uk/2010/02/16/hse-raise-regulatory-issue-ri-against-westinghouses-ap1000-nuclear-reactor-design/?rss

and Daily Post 19th February 2010
http://www.dailypost.co.uk/news/north-wales-news/2010/02/19/terror-attack-fears-over-reactor-for-wylfa-b-power-station-55578-25867507/

(3) Mother Jones 17th February 2010
http://motherjones.com/blue-marble/2010/02/obama-goes-nuclear

(4) Sortir du Nucleaire 8th Mar 2010
http://www.sortirdunucleaire.org/index.php?menu=actualites&sousmenu=dossiers&soussousmenu=EPRrevelations&page=index

(5) Guardian 8th March 2010
http://www.guardian.co.uk/business/2010/mar/07/edf-nuclear-reactor-chernobyl-risk

5. Blow to Government's confidence on effective arrangements for waste

Britain may not find a suitable place for a planned £12bn hole to bury radioactive waste from new nuclear power stations, according to the Committee on Radioactive Waste Management. CoRWM says it is still "unclear" what will happen to waste in the long-term, and "insufficient attention" has been paid to public confidence in disposal of radioactive material. While "some plans exist" to deal with the UK's high-level waste, whether they are effective is "a matter of judgment". It also raised fears that the Government may try to impose a giant waste storage facility on a hostile community, if no UK region agrees to take on the waste. (1)

Meanwhile, Elaine Woodburn, the leader of Copeland Borough Council told a meeting of the West Cumbria Managing Radioactive Waste Safely Partnership in Whitehaven in February that building a nuclear waste geological disposal facility (GDF) in West Cumbria is "not a done deal." She stressed that Copeland, Allerdale and Cumbria county council had expressed an interest into the possibility of hosting a deep underground repository that's all. (2)

(1) Telegraph 4th March 2010
http://www.telegraph.co.uk/finance/newsbysector/energy/7362372/UK-faces-struggle-to-find-site-for-12bn-nuclear-waste-storage.html

CoRWM's response to the NPS Consultation is available here: http://www.corwm.org.uk/Pages/e%20Bulletins/2748%20Final%20NPS%20Consultation%20Response%202%20March%202010.pdf

(2) Whitehaven News 24th February 2010
http://www.whitehaven-news.co.uk/news/underground-dump-not-a-done-deal-1.676384?referrerPath=news

6. Climategate

In case you've been up to your eyes on nuclear consultations and you're not sure where the debate has got to on the credibility of climate science, The Guardian has a useful website. (1) Nothing uncovered in the hacked email scandal destroys the argument that humans are warming the planet. None of the 1,073 emails plus 3,587 files containing documents, raw data and -computer code upsets the 200-year-old science behind the "greenhouse effect" of gases such as carbon dioxide, which traps solar heat and warms the atmosphere. Nothing changes the fact that carbon dioxide is accumulating in the atmosphere thanks to human emissions from burning carbon-based fuels such as coal and oil. And we know the world is warming as a result. (2)

Climate scientists will have to work harder to earn the warranted trust of the public. But while science gets its house in order, we need some perspective. In the midst of a cold winter it may be hard to convince ourselves, but the world is still warming. Humanity is still to blame. And we still, urgently, need to do something about it.

Dr. Robert Watson was chair of the Intergovernmental Panel on Climate Change from 1997 to 2002. He was opposed by fossil fuel companies like ExxonMobil and the Bush administration waged a successful campaign to have him replaced with Rajendra Pachauri. Now Watson is Strategic Director for the Tyndall Center at the University of East Anglia and Chief Scientific Advisor for the UK Department for Environment, Food and Rural Affairs. Writing in Yale's Environment 360 Online Magazine, he gives detail of four errors and the leaked e-mails. Concluding he says:

"Given the limited success at Copenhagen, 2010 is a critical year for the world's political leaders to unite in the fight against climate change. Strong and visionary political leadership will be essential. We must not allow the skeptics to use the incident at the University of East Anglia or the mistakes in the IPCC report to distract us or derail the political will to safeguard the planet". (3)

A Washington Post Editorial said while the mistakes need to be corrected in the overall scheme of things they are "trivial". It continues:

"If current trends persist, it's likely that in coming decades the globe's climate will change with potentially devastating effects for billions of people." (4)

(1) Guardian Climate Wars 9th February 2010
http://www.guardian.co.uk/environment/series/climate-wars-hacked-emails?&CMP=EMCENVEML660
(2) Guardian 9th February 2010
http://www.guardian.co.uk/environment/2010/feb/09/climate-emails-truth-global-warming
Guardian 5th February 2010
http://www.guardian.co.uk/environment/2010/feb/05/climate-change-hacked-emails
(3) Climate Progress 6th March 2010
http://climateprogress.org/2010/03/06/ipcc-head-robert-watson-human-induced-climate-change-science/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+climateprogress%2FlCrX+%28Climate+Progress%29
(4) Washington Post 22nd February 2010
http://www.washingtonpost.com/wp-dyn/content/article/2010/02/21/AR2010022102917.html

7. Zero Carbon Britain

In May 2010 the Centre for Alternative Technology will launch its new report Zero Carbon Britain 2030 - a policy and technology scenario designed to expand on the detail and answer questions raised by the initial report. It integrates cutting-edge findings from leading experts and researchers from a variety of organisations and disciplines. It details how we can use indigenous renewable resources to rapidly reduce greenhouse gas emissions. More information can be found at: http://www.zerocarbonbritain.com/

8. Warmer Homes: Greener Homes

The Government has launched its new "Warmer Homes: Greener Homes" initiative. It says it is paving the way for up to 7 million homes to receive eco-upgrades by 2020. With around one quarter of UK emissions coming from energy used in homes the Strategy is aimed at cutting emissions from the UK's homes by 29% by 2020. The strategy will be implemented in a three stage plan, which will insulate 6 million homes by the end of 2011; insulate all practical lofts and cavity walls by 2015; and have offered up to 7 million eco upgrades by 2020; all homes to have smart meters. (1)

Under a proposed 'Pay as You Save' scheme, householders can install insulation and small-scale renewables at no initial cost, and then pay for them over time through the savings on their energy bills. The government is planning legislation to link schemes to the home rather than the owner. This means when the house is sold, the new owners can take over. (2)

The 'green loans' will be availabe through supermarkets or DIY chains and will be attached to the house rather than the owner so costly work can be paid back over a period of up to 25 years. Households can get a better idea of what work needs to be done to their home through a new website or telephone advice line, or even through a "virtual green makeover" online. A network of green show homes will also enable people to get an idea of energy saving measures. Landlords will also be expected to ensure homes are more energy efficient and standards for rented properties will be introduced from 2015. The Home Energy Management Strategy is expected to create up to 65,000 jobs. To protect consumers against "cowboy eco-builders" a new accreditation scheme will ensure minimum health and safety standards for workmen. (3)

Energy suppliers will have a new obligation from 2013, which will require them to help householders save energy and to invest in energy saving, including loft and cavity wall insulation and eco-upgrades. The government expects this mechanism to deliver around two thirds of the finance required. A new alliance between energy companies and

local authorities will also come into play from 2013, where energy companies must consult with local authorities on partnerships to deliver against this obligation.

Responding to the announcement, Scott McLean, marketing director of renewable energy service provider Ownergy, welcomed the scheme, claiming it would help make the Renewable Heat Incentive and Feed-in Tariffs a success. Liberal Democrat shadow energy and climate change secretary Simon Hughes, who said it was "staggering" that it had taken the government nearly 13 years to come up with plans to green our homes and cut people's fuels bills. He said: "Refurbishing our homes should be a win-win situation, but Labour has bungled this kind of thing before. Today's announcement will leave millions of families without the warm homes they need for up to 20 years. We urgently need a nationwide scheme to make every home a warm home." (4)

(1) DECC Press Release 2nd Mar 2010
http://www.decc.gov.uk/en/content/cms/news/pn2010_037/pn2010_037.aspx

(2) WWF Press Release 5th Mar 2010
http://www.wwf.org.uk/news_feed.cfm?uNewsid=3735&homepage=true&section=wedo

(3) Telegraph 3rd Mar 2010
http://www.telegraph.co.uk/earth/earthnews/7353538/Fuel-bills-will-pay-for-eco-upgrades.html

Guardian 2nd Mar 2010
http://www.guardian.co.uk/business/2010/mar/02/energy-saving-targets-cost-homeowners

(4) New Energy Focus 2nd March 2010
http://www.newenergyfocus.com/do/ecco/view_item?listid=1&listcatid=32&listitemid=3650&section=Policy

9. View on the Ground

- More than 100 people took to the streets of Thornbury on 5th March to protest against plans for a new nuclear power station at Oldbury. (1)

- The National Grid has been told to offer more than just pylons in its consultation on the pylon route from Hinkley Point to Avonmouth. The Infrastructure Planning Commission (IPC) advised the energy supplier it did not give enough information on alternatives to pylons during the public consultation. (2)

- Tenders were due in at the beginning of March for the earthworks contract for Hinkley Point. Five contractors are believed to be in the running for the £30m deal, including a Balfour Beatty/Vinci joint venture, a Bam Nuttall/Kier/URS joint venture, and a Laing O'Rourke/Ferrovial joint venture. Carillion and Sir Robert McAlpine are also bidding independently. (3)

- The Lib Dems want Romney Marsh to be promoted as an Eco-tourism destination now that the Government has dropped Dungeness from its list of potential sites. (4)

- Water supplies in east Suffolk could be put under stress if permission is given for Sizewell C. Sizewell B uses about 800 cubic metres a day - about 7% of the total demand in the local catchment area. A twin-reactor Sizewell C could demand 1,600 cubic metres a day - in one of the driest parts of the country and where householders and businesses have in the past few decades faced restrictions on use. (5)

- Plans for a dry store to house spent waste fuel from Sizewell B have gone to the Department for Energy and Climate Change. (6)

- Friends of the Earth Peterborough has come out against plans to dump low level radioactive waste on a landfill site at Kings Cliffe in Northamptonshire. It says it is worried about radioactivity leaching in to the Rutland Water and River Nene. Peterborough City Council has similar concerns. The local campaign group, Waste Watch has made a lengthy submission to Northamptonshire County Council (7) which is expected to decide on whether to give the site permission on 16th March (8)

- Meanwhile, Copeland's pro-nuclear MP, Jamie Reed, has come out against plans to dispose nuclear waste at Keekle Head – a former opencast coal site. Endecom has already submitted a planning application. In order to free up capacity at Drigg, the government is looking for alternatives such as landfill to bury very low levels or radioactive material.

- Plans to build nuclear power stations at Braystones and Kirksanton could plunge Cumbria into a “permanent nuclear winter”, Doug Cross, a scientist and environmental consultant, told a meeting of tourism and business leaders. If the plans went ahead it would constitute a “nightmare” for Cumbria’s environment and its economy. Holiday park owners are already losing business over customer fears that their holiday homes will be in the shadow of nuclear reactors. (10)

(1) Gloucestershire Gazette 8th Mar 2010
http://www.gazetteseries.co.uk/news/5047125.Protesters_take_to_the_streets_against_new_nuclear_power_station/

(2) Planning 5th March 2010
http://www.planningresource.co.uk/news/login/987808/

(3) New Civil Engineer 25th February 2010
http://www.nce.co.uk/news/energy/five-in-the-briefs-frame-for-hinkley-nuclear-ground-works/5214710.article

(4) All Day Breakfast 3rd March 2010
http://www.theallday breakfast.com/mixed-messages-at-lib-dem-eco-tourism-summit/

(5) Beccles & Bungay Journal 8th Mar 2010
http://www.becclesandbungayjournal.co.uk/content/bbjournal/news/story.aspx?brand=BBJOnline&category=NEWS&tBrand=BBJOnline&tCategory=news&itemid=NOED08%20Mar%202010%2011%3A03%3A01%3A960

(6) BBC 25th February 2010
http://news.bbc.co.uk/1/hi/england/suffolk/8537725.stm

(7) Hunts Post 3rd March 2010
http://www.huntspost.co.uk/content/hunts/news/story.aspx?brand=HPTOnline&category=News&tBrand=HertsCambsOnline&tCategory=newslatestHPT&itemid=WEED03+Mar+2010+10%3A22%3A06%3A377

See also BBC 19th Feb 2010
http://news.bbc.co.uk/1/hi/england/northamptonshire/8524357.stm

(8) http://www.kingscliffewastewatchers.co.uk/

(9) Whitehaven News 24th February 2010
http://www.whitehaven-news.co.uk/news/mp-opposes-keekle-head-for-nuclear-waste-site-1.676386?referrerPath=news/

(10) Cumberland News 16th February 2010
http://www.cumberlandnews.co.uk/nuclear_winter_warning_over_plans_for_west_cumbria_power_stations_1_672802?referrerPath=business