

Nuclear Free Local Authorities **briefing**



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Subject: **Report on the Annual Conference 2000**
Lady Margaret Hall, Oxford, 14 September 2000

**Tackling Climate Change Sustainably:
The Local Authority Contribution**

Introduction

This year's Conference focused on the question of how future energy needs can be met and substantial reductions of climate changing carbon emissions secured. Average global temperature is rising with different adverse regional environmental impacts. Proponents of nuclear energy argue that it produces negligible carbon emissions and has the capacity to substantially replace fossil fuel burning for electricity generation. Recent European Commission research concluded 85 new nuclear stations would be needed in the EU to meet future energy requirements and meet carbon emission reduction targets. The nuclear industry, with tacit UK Government support, will argue in international negotiations next month that nuclear power should be recognised as a clean energy source and attract subsidies to help it expand in the developing world, principally China, India and Brazil, to reduce their accelerating carbon emissions resulting from economic growth.

But is nuclear power the only way out of the carbon crisis? Is there an alternative energy path to which local authorities can contribute? Here in the UK, what are the implications of climate change for the nuclear industry's legacy? The NFLA 2000 Conference set out to:

- explore the role of local authorities in vital sustainable energy strategies for carbon emission reduction;
- consider the options for meeting future energy needs without new nuclear stations;
- preview the new local government 'Councils for Climate Protection' pilot project; and
- identify the implications of climate change for UK nuclear waste management policy.

(Cont...)

THE LOCAL GOVERNMENT VOICE ON NUCLEAR ISSUES



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Eryl McNally MEP: President, European Forum for Renewable Energy Sources & Socialist Co-ordinator for the European Parliament's Industry Committee

Eryl McNally provided the Conference opening address. She highlighted that whilst the nuclear industry has had a difficult time in the UK and that other European countries were committed to its phase out, the current high energy prices and low interest rates made new nuclear construction more attractive.

Since the last round of European elections in May 1999 the balance of opinion in the European Parliament had shifted in favour of nuclear energy. An 'anti-nuclear' stance would not win support in the Parliament at this time. The Euratom Treaty, which is a corner stone of the European Union, remains a vehicle for the promotion of nuclear power to the disadvantage of the renewable sector. Whereas it enjoyed billions of pounds of European support over 40 years the renewable sector is seeing 5 years of support being cut because of Community competition policy. (Figures provided in a later presentation showed UK subsidy to the nuclear sector at £11bn between 1990-1995 compared with £360 for renewables over the same period).

At international Climate Change Convention talks the European Union negotiates on behalf of member states, and whilst it had decided not to support the inclusion of nuclear power in a Convention 'clean development mechanism', which would attract subsidy for offsetting carbon emissions from fossil fuel burning, France and Britain disagreed.

Finally, Eryl drew attention to good practice at a sub-national level pointing to the North East Energy Strategy and the development of a new London Energy Strategy initiated by Mayor Livingstone. Local Authorities had increased powers to launch or nurture renewable energy schemes. She highlighted the importance of getting citizen support for schemes and recommended making use of the EU's campaign for take off. She also urged regional development agencies to do more to disseminate information to local authorities.

Dr Merylyn McKenzie Hedger: Head of UK Climate Impacts Programme Environmental Change Unit, Oxford University

Dr Merylyn McKenzie Hedger reported on the findings of the UK Climate Impacts Programme (UKCIP) established by the DETR in 1997 to provide an integrated assessment of the effects of climate change on the UK.

Average temperature in the UK is rising and the main focus of DETR efforts is to mitigate the effects. Some climate change will occur and adaptation strategies will be required. The EU target is to stabilise carbon concentration in the atmosphere at 550ppm (parts per million) - equivalent to a temperature increase of between 2 or 3°C degrees.

Merylyn reported UKCIPs findings to date (which had been published by DETR earlier in the year). Four different climate change scenarios had been projected into the future with estimates of impacts assessed for the 2020s, 2050s and 2080s. Broadly, these scenarios produced the following priority impacts (particularly relevant to the UK nuclear industry which is largely coastally located):

- increased storms, flooding and rising sea levels around Scotland
- increased winter flooding and storm surges (e.g. similar to the Towyn disaster) in Wales
- rising sea levels and storm surges threatening the coast of North West England

- coastal flooding and overtopping of sea defences more likely in the South East due to high water levels
- rising sea levels, coastal erosion and flooding of low lying land in the South West

(NB. With current nuclear industry policy for plant decommissioning stretching to 135 years after shutdown, the threat to coastally located nuclear sites from flooding or coastal erosion is apparent.)

Aubrey Meyer: Global Commons Institute

Aubrey Meyer argued that Climate Change cannot be tackled at a national level. An adequate global response is required. Concentrations of carbon in the atmosphere are now 30% higher than ever before and the upward trend is continuing. No one knows where it will end.

Economic losses from natural disasters are presently growing at 10% a year and would exceed the total value of all human production within two generations on current trends. The heads of both the US National Ocean Atmosphere Administration and UK Meteorological Office recently stated, "We are in a critical situation and must act soon." (The Independent 24 December 1999).

Aubrey argued that if the world embarks on a determined attempt to slow and then halt climate change, vast commercial investment opportunities in the development of renewable energy sources will be created. Moreover, slowing the pace of climate change will decelerate the increase in insurance claims and economic losses, giving time for the international financial system to adapt to those burdens.

Aubrey outlined an approach promoted by the Global Commons Institute called 'Contraction & Convergence' - a global framework to avert dangerous climate change. This approach was now beginning to win international support including that of the Environment Minister, Michael Meacher.

What is "Contraction and Convergence"? (C&C)

"Contraction and Convergence" (C&C) is an international framework for limiting the greenhouse gas (ghg) emissions causing climate change. It recognises that commercial efficiency must be politically guided, rather than solely reliant on the market, if climate stabilisation is to be achieved.

C&C involves countries agreeing a reviewable global ghg emissions 'contraction budget' resulting in a precautionary, stable value for ghg concentrations. The internationally tradable shares in this budget are then agreed on the basis of simple 'convergence' from now, where shares are broadly proportional to income, to a target date in the budget timeline after which they remain proportional to an agreed base year of global population. Proceeds from this trade can be directed to the deployment of zero emissions technology.

On the basis of precaution, all governments should collectively agree to be bound by an atmospheric 'contraction' target (for example, 450 ppm) which would then make it possible to calculate the diminishing amount of greenhouse gases that the world could release for each year in the coming century.

Countries unable to manage within their shares would, subject to agreed rules, be able to buy the unused parts of the allocations of other countries. Sales of unused allocations would give less developed countries the income to fund development in zero-emission ways. It was suggested

industries in developed countries would benefit from the export markets this restructuring would create.

Aubrey argued that the Kyoto Protocol on controlling carbon emissions, to be reviewed at a sixth Conference of the 'Parties' in The Hague next month (CoP6), is still an inadequate response to the climate dilemma. It must be sooner or later be superseded by a global C&C framework. Jan Pronk, Chair of CoP6, had stated C&C is more equitable, easier and cheaper than other options and unlike others can also keep within a tolerable 2°C increase in temperature.

Aubrey concluded calling for wider support for C&C. Backing from local government organisations and the International Council for Local Environmental Initiatives could be decisive.

Ashok Sinha: Solar Energy Consultant

Ashok Sinha, put the case for greater use of solar energy. He argued: the threat of climate change is real and grave; conventional energy production presents significant environmental hazards and is based on depleting resources; the majority of the world still awaits the provision of affordable energy for economic and social development, and; an 'urban renaissance' is needed in our cities.

Solar Photovoltaics is a CO₂-free renewable electricity source that can assist overseas development and – being ideally suited to the built environment - aid domestic urban regeneration. World trade in PV is expanding prodigiously, bringing down costs. The UK's competitors, recognising the potential environmental and business benefits, are making ambitious investment in their growing PV manufacturing bases. Yet while countries such as Germany, Japan and the USA forge ahead (PV capacity currently at 60Mw (megawatts), 133Mw and 100Mw respectively), the UK is close to the bottom of the industrialised world in its support for PV (0.7Mw). A major obstacle is the continued (and erroneous) view of government that there is currently no significant UK market for PV even in niche applications.

By contrast, creative examples of the use of PV for sustainable development are provided by the Nieuwlands mixed development in the Netherlands – which alone has more installed PV capacity than the whole of the UK (1Mw across 500 houses) and the use of rooftop PV arrays to drive communal electric cars in the BedZed project in the London Borough of Sutton. The key in both cases is the vision of the respective local authorities set within an ethos of partnership-building.

Ashok concluded saying PV is more than an electricity system: it is a durable, versatile and sustainable construction technology. With institutional support, the UK's PV industry could thrive, increasing UK business competitiveness, bringing electricity to the world's poor and - as part of a wider renewable energy/energy efficiency strategy - help minimise climate change.

David Still: General Manager, AMEC Border Wind

The Government target for renewables is 10% of electricity generation by 2010. 5% of this will come from on and off shore wind. But achievement of the target is difficult because current energy policy is based on crude 'lowest' price criteria. David believed that there needs to be agreed an energy policy which is based on an overall energy mix which considers environmental impact and long term security of supply as well as cost. It is 'lowest cost' generation which drives current development in open country with high wind speeds, sometimes resulting in high visual impact and local resistance. In fact, wind generation is suitable for forestry sites and 'brownfield' sites with lower average wind speeds (and lower visual impact).

Local authorities have an important role. Derwentside District Council's proactive stance has helped in the development of three small wind farms in the area which will produce 10% of domestic electricity required by the District. David called on local government to view wind farm development more positively.

Stewart Boyle: Freelance Writer and Energy Consultant, speaking on behalf of the Combined Heat & Power (CHP) Association

In the run up to the COP6 meeting in the Hague later this year, the role of low carbon technologies has increasingly been highlighted. CHP has an important role in the transition away from carbon emitting fuels towards renewable energy options and the Government has announced a 10,000 Mw (megawatt) CHP target by 2010, about half the potential capacity but double existing output. However, current energy market conditions undermine CHP development.

The main problem is the New Electricity Trading Arrangements (NETA) and the way the Climate Change Levy (CCL) will operate from next April. NETA requires continuous energy supply and the variation in CHP output between 'heat' and 'power' generation makes it difficult to meet NETA demands. Power generated by CHP is not exempt from CCL and this is an economic disincentive to new CHP development.

Therefore Stewart called for full CCL exemption for CHP and the introduction of a 'CHP obligation' - a requirement on electricity companies to buy an agreed proportion of their electricity requirements from CHP plant. He argued carbon emissions savings from CHP were good at up to one million tonnes of carbon per year for a 1,000 Mw plant and, pending the further development of other renewables, that CHP had a vital role as a transitional technology available for much wider exploitation now..

Martin Fodor: Policy Co-ordination Officer (Sustainable Development) Local Government Association of England & Wales

Martin Fodor argued that currently energy policy and climate change was not sufficiently prioritised by local government, yet these issues were pivotal to all three strands of sustainable development: environmental, social and economic.

Martin urged local authorities to strive to develop sustainable communities that:

- gave everyone access to affordable energy services (e.g. warmth);
- promoted settlement patterns and buildings that enabled and encouraged low energy life styles; and
- exploits the job creation, economic regeneration and community ownership potential of energy conservation and renewable energy, in both urban and rural areas

The enabling role of local authorities through housing development, planning, community co-ordination, business support and target setting (e.g. for renewable energy procurement - see suggested 'Action' at the foot of this report) was detailed. Councils were encouraged to use the new powers to promote community well-being conferred on them by the Local Government Act 2000. The Government draft Climate Change Strategy, March 2000, p37, recognised local authorities "...are uniquely placed to provide vision and leadership to their communities...".

Finally, the new Councils for Climate Protection pilot project was outlined. Over 30 councils had been recruited to the project and each was required to:

- establish a base year emissions analysis and a forecast of ghg emissions for a target year
- set an emissions reduction target
- develop and adopt a local action plan to achieve the target
- implement the local action plan; and
- monitor and report on ghg emissions and implications of actions and measures

(For further information about Councils for Climate Protection contact: Philip Matthew on 020 7296 6600 or philip.matthews@lga.gov.uk. For background on the international umbrella Cities for Climate Protection Campaign go to: www.iclei.org/co2. For further information about the energy advisory service for local government go to: www.easiest.org.uk).

Dr Chris Naish: AEA Technology

Chris Naish, the Commercialisation Programme Area Manager in the DTI's New and Renewable Energy Programme managed by AEA Technology, briefly reviewed the forms of renewable energy currently exploited in the UK; outlined current Government targets and key issues; and discussed the relationship between local authority roles and the promotion and use of renewables.

The obligation now on electricity companies to purchase an increasing proportion of their supplies from renewable sources was explained and the government projections outlined (see www.dti.gov.uk/renew/condoc/policy.pdf). The role of Government regional offices in the development of regional renewable energy strategies was also recapped.

Chris urged councils to use their powers to provide information to local communities about renewable energy (e.g. through demonstration projects) and for councils to always consider the scope for energy saving in new buildings and refurbishments (especially potential for solar gain).

However, Chris focused on local authority purchase of electricity generated from renewable energy sources ('green' electricity) based upon the DTI's New and Renewable Energy Programme's Guidelines for Establishing a Local Authority Market for Green Power (copies from chris.naish@aeat.co.uk). Current green energy suppliers were listed and tendering processes based on experience of local authorities to date were explained.

'Best Value' provided a mechanism for councils to choose between suppliers. For example, whilst 'green' electricity may cost more to buy than 'brown' electricity at source, after April next year when councils have to pay the Climate Change Levy on their 'brown' energy purchases, green electricity, which will not attract the CCL, can represent 'best value' by bringing a net saving to councils.

Chris concluded by inviting councils to contact him if they want advice about how to get started.

Yves Marignac: Deputy Director, World Information Service on Energy, Paris

Yves Marignac addressed directly the question of whether nuclear energy would be required to control climate change. It was argued that nuclear energy remained dangerous and particularly difficult to control, as many accidents in the past have showed. It produces radioactive wastes, some of them poisonous for millions of years, and no publicly acceptable solution for their final disposal exists.

However, nuclear generating plants produce almost zero carbon emissions, therefore dare we reject it if it is the only effective solution?

A detailed analysis of the respective systematic impacts to different energy options leads to conclusions that actually make the question irrelevant. First of all, the nuclear industry has little chance to influence any short term carbon reduction strategies: it represents only 2.5% of the final energy demand on the planet. The second important point is the change in the comparative figures for carbon emissions from energy production when evaluated with a systematic approach. For example, nuclear power indirectly produces carbon emissions due to the high electricity consumption of its own fuel cycle, especially the uranium enrichment process (which in France consumes 5% of all electricity produced).

Also any comparison should take into account not only coal, but a variety of energy supply sources. Moreover, one has to compare the emissions, not for the same energy production, but for the same energy service (e.g. the requirement for both electricity and space heating in an average household). Under those conditions, the gap between nuclear energy and fossil fuels is closed. Natural gas co-generation is only three times more emitting than nuclear power.

Therefore the choice is not between nuclear power and climate change. It is between maintaining the development scheme of the past, with no respect for long term needs of human societies and their environment - bringing both nuclear power and climate change - or moving to a new sustainable development. In the energy sector this means to reduce as much as possible the share of centralised production, including nuclear power, and to develop decentralised production and energy efficiency. Far from being an incentive to a renewal of nuclear power, the climate change challenge should be a reason for developing new and wiser ways of producing and consuming energy.

ACTION:

Sustainable Energy Supply Contracts: Outline Model Tender Process

It is recommended local authorities which have not already done so consider:

1. Establishing a corporate target for energy supply from renewable sources by (year)
2. Agree to seek tenders
3. In pre-tender process:
 - describe corporate targets & policy (including policy towards nuclear energy)
 - seek declarations of interest from electricity supply companies
 - seek commitment from electricity supply companies to meet local authority targets/policy

- seek evidence of good social/environmental performance (via existing documentation e.g. Annual Reports/Company Reports on social and environmental performance with targets and data)
4. Choose from bids that will achieve best outcome for local authority green energy targets and other relevant policies (e.g. policy towards nuclear energy, sustainable development, environmental goals, local economic opportunities/jobs etc.)
 5. Select supplier for (x years)

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