Sustainability Committee

SC(3)-05-07 (p1): 11 October 2007

Friends of the Earth Cymru Submission to:The National Assembly for Wales Sustainability Committee Inquiry into Carbon Reduction in Wales Topic 1: Residential Carbon Reduction

Background

Almost weekly, we hear of fresh scientific evidence warning that the impacts of man-made climate change are occurring sooner and are more intense than many predicted.

This week, for instance, it was reported that temperatures in the Canadian Arctic have reached 15^{o}C higher than the long-term average and the loss of Arctic sea ice reached a record low that is 39% below the average. In what must be one of the sickest ironies ever, some oil and gas companies are now poised to move in to drill through the thawing ice to extract more carbon fuels that will cause further warming, thawing and climatic instability. Such actions give an indication of some of the significant obstacles that confront efforts to cut emissions of climate changing gases and chemicals.

In February of this year, the Inter Governmental Panel on Climate Change (IPCC) issued its 4th report on the science of climate change. This predicted that, if we continue as at present, average global temperatures would rise by around 3^{o}C this century, with the possibility that the rise could be in excess of 6^{o}C. The IPCC predicts that a temperature rise of 2^{o}C above pre-industrial levels would have catastrophic consequences but, in its report on the mitigation of climate change issued on May 4th, concluded that it was economically and technically feasible to prevent this provided that action is taken urgently and a number of barriers can be overcome. EU governments have agreed that they should aim to keep global warming below 2^{o}C.

Although the IPCC's scientific predictions are extremely worrying, some scientists believe they under-estimate the severity of the threat and were watered down in order to achieve political consensus amongst the 113 countries that signed off the final version of the reports. The New Scientist, for instance, has carried a number of articles claiming that recent evidence, particularly that relating to sea level rise, has been excluded. One of the world's leading climate scientists, Dr Jim Hanson of NASA, wrote in July that the massive ice sheets of Greenland and Antarctica are disintegrating much faster than predicted and that this could result in a sea level rise of around 5 meters by the end of the century. And in June, the US National Academy of Sciences stated that carbon dioxide emissions have been rising by about 3% a year, which is higher than the worst case scenario outlined in the IPCC reports.

Whichever predictions prove to be correct, it is clear that we face a massive challenge and have to take bold and radical action now to avoid catastrophe. As the chairman of the IPCC, Dr Rajendra Pachurai has stated:

"We have a very short window of opportunity for turning around the trend we have in rising greenhouse gas emissions. We don't have the luxury of time."

It is against this background of a growing awareness of the severity of the threat posed by climate change and the failure of government's to act that our parent body, Friends of the Earth (England, Wales and Northern Ireland), launched the Big Ask campaign in 2005. This called for new legislation which would require successive Government's to cut UK annual carbon dioxide emissions by at least 3% every year. The campaign won the support of the majority of MPs in all the political parties and, as a result, the Government has drafted a Climate Change Bill for inclusion in this year's Queens Speech. Although we welcome the introduction of the Bill, we regret that it falls short of what is required to meet the challenge of climate change. We believe that the Bill ought to include annual emission reduction targets to ensure that the UK achieves cuts of at least 80% by 2050, and should include emissions from aviation and shipping.

We welcome the fact that, on February 13th this year, Assembly Members unanimously supported the motion that "mitigating the impact of climate change is the most important challenge facing the National Assembly and believes that this must become the first priority of the Assembly Government".

General Questions

1. Is the proposed 3 per cent annual reduction target by 2011 'in areas of devolved competence' sufficient to enable Wales to make its full contribution to meeting UK-wide targets? If not, what targets should be put in place?

The first issue that needs to be addressed in this question is that of 'areas of devolved competence'.

The generation and use of energy is responsible for almost all of the carbon dioxide emitted by human activity in Wales. DEFRA's 'Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland: 1990-2004' shows that in Wales in 2004, this was made up of:

Power generation - 31%

Manufacturing industry & construction - 26%

Road transport - 14%

Residential - 11%

Petroleum refining - 8%

Commercial/Institutional - 3%

Gaining a clear understanding of how Welsh Assembly Government powers can influence emissions in these areas is difficult. While the Welsh Assembly Government has devolved competence over transport policy, for instance, emissions in this sector can be influenced by the Treasury's powers over vehicle and fuel taxation.

The Energy Review, produced by The Cabinet Office in 2002, points out that, while responsibility for energy policy in the UK is mainly reserved to the DTI, a number of areas relating to energy policy are devolved to Wales. These are

environment policy

support for innovation

housing

planning (apart for power station consents over 50MW)

control of the budget for energy efficiency schemes in Wales e.g The Home Energy Efficiency Scheme (HEES) and part of the activities of the Carbon Trust.

The Welsh Assembly also has a world leading remit to promote sustainable development that takes into account energy issues.

The areas not devolved are

promotion of renewable energy

promotion of energy efficiency

building regulations

power station consents (over 50MW)

overhead electricity line and gas pipeline consents.

Despite the lack of devolved powers on energy policy, the Welsh Assembly has attempted to play a significant role in this area. As the Richard Commission pointed out:

"The boundary between devolved and non-devolved issues did not appear to pose a problem, with the Assembly Government seeking to work with and influence Whitehall and businesses on non-devolved issues such as energy." [Ch.5 Para.74]

An example of this was the publication, by the Economic Development Committee, of reports on renewable energy (in 2002) and energy efficiency (in 2003). These were based on "the Assembly's responsibility to promote sustainable development whilst facilitating economic growth and development". Both reports attempted to steer Wales towards becoming 'a global showcase for clean energy developments and energy conservation', a vision set out in the Assembly Government's national economic development strategy, 'A Winning Wales' (January 2002). This was indeed an ambitious aim for a Government that did not formally have responsibility for energy policy.

Since then, the Welsh Assembly Government has progressed energy policy in Wales by, for instance, setting a target to reduce carbon dioxide (CO_2) emissions in Wales by 20% by 2020 from the 2000 level and producing an Energy Efficiency Action Plan (February 2004), TAN 8 -Planning for Renewable Energy - and the accompanying Ministerial Interim Planning Policy Statement (July 2005), and the Energy Route Map consultation document (June 2005). A number of energy actions are also referred to in the Sustainable Development Action Plan (October 2004), the Wales Spatial Plan (2004), the Environment Strategy (2005) and its Action Plan. Point 1 of the latter promised to set ambitious targets to reduce greenhouse gas emissions in Wales by March of this year but this did not happen.

Although the Welsh Assembly has had some influence in shaping Welsh energy policy, there have been two key areas where it would like to have control but to date has failed to do so. These are the devolution of Building Regulations and the power to decide on electricity generating stations over 50MW. Both could have an important impact in controlling CO_2 emissions in Wales.

The Government of Wales Act 2006 enables the Welsh Assembly Government to acquire new powers for it to achieve reductions in CO_2 emissions. Schedule 5, Part 1, lists the 20 devolved areas, called Fields, within which the national Assembly for Wales can seek legislative competence to pass Assembly Measures over certain topics, called Matters. We believe that there are six areas in which added powers could be sought to help develop carbon reduction policies. These are agriculture, economic development, environment, highways and transport, housing and local government. We understand, though, that the Act allows for exceptions to Matters for which legislative competence could be sought and that these could restrict the Assembly Government's powers in relation to carbon emissions.

There appears to be some confusion as to what powers the Welsh Assembly Government currently has and is able to acquire in order to

reduce CO2 emissions. At the Governance of Wales seminar, held at the Senedd on June 21st, it was evident that legal experts were themselves uncertain of the powers currently or potentially available, with one pointing out that more were available than most people realised. We hope this inquiry will clarify the situation.

We welcome the fact that 'One Wales' states that specific sectoral targets will be set for the residential, public and transport areas but believe that the Welsh Assembly Government should be asked to clearly define the areas of devolved competence available to enable it to deliver the proposed cuts in emissions. In this regard, we urge the Welsh Assembly Government to gain the devolution of powers over the setting of Building Regulations as soon as possible and to ensure that they are implemented fully.

We also believe that the Assembly Government should be required to specify how it proposes to "work with the heavy industry and power generation industries to reduce emissions in those sectors", as stated in 'One Wales'. Power generation is the largest single source of CO2 emissions in Wales. Yet Wales has no powers to specify emission limits on new power stations over 50 MW. So the Assembly Government could not specify Combined Heat & Power (CHP) power stations which could be 80+% efficient rather than Combined Cycle Gas Turbine (CCGT) power stations which are around 58% efficient.

Recently, a new 800 MW CCGT at Uskmouth was given the go-ahead by the UK government. It will be built only as 'CHP-ready' although there surely must be plenty of scope for a district CHP scheme around Newport especially as there is much new development land at Llanwern.

Another two 2GW CCGT power stations have been proposed at Pembroke and Milford Haven without CHP. There is little hope that Wales could achieve overall CO2 reductions in the foreseeable future if all these power stations go ahead as proposed. The fitting of CHP, as practised in some other European countries, could significantly reduce these emissions.

As well as maximising opportunities for delivering emission reductions in devolved areas, the Assembly Government should also work as closely as possible with the UK government in non-devolved areas and in the implementation of the Climate Change Bill. In our submission to the consultation on the Bill, we have asked that the UK government negotiates an agreement with each of the devolved jurisdictions regarding the level of cuts for that jurisdiction. This should take the form of a published strategy for each jurisdiction showing how the targets will be met, or a "memorandum of understanding". It may also be that the devolved jurisdictions decide to pass their own legislation to place further duties on their Ministers.

The main UK-wide targets that Wales is, or shall be, required to contribute are:

the Kyoto protocol target of reducing greenhouse gas emissions by 12.5% a year by 2010 from 1990 levels as the UK's contribution to the EU target of 8%.

the UK Government's target of reducing CO2 emissions by 20% by 2010 from 1990 levels.

the Climate Change Bill provisional targets of 26-32% CO2 reductions by 2020 and 60% by 2050 from 1990 levels. This is now being reviewed by the Committee on Climate Change, in response to the latest IPCC reports, with the possibility of it being raised to 80% by 2050.

A major concern we have with the proposed 'One Wales' 3% annual emission reduction target is that it only "aims" to achieve reductions and as such is not a firm commitment. The wording ought to be strengthened to demonstrate a greater determination to achieve cuts.

Even once this is done, the 'One Wales' 3% target, although a step in the right direction, would be too small a step to enable Wales to make its full contribution to meeting UK-wide targets. As it would apply to existing areas of devolved power only, it would not address important sources of CO2 in Wales, such as power generation and industry. And by being introduced from 2011 onwards, it would make no contribution to the UK's Kyoto commitment or its 2010 CO2 target.

The severe crises of climate change, in which we have but a short period of time in which to avert catastrophe, requires countries and regions to take a strong individual lead as well as engaging in joint actions and agreements. And, it is now being realised that the seemingly challenging targets being proposed in the Climate Change Bill fall well short of what is required. The Tyndall Centre for Climate Change Research at Manchester University, in its response to the draft Climate Change Bill's carbon reduction targets, has stated that targets of reducing CO2 by 70% by 2030 and 90% by 2050 would be required to prevent the UK contributing to a temperature rise of $2^{O}C$.

If Wales is to play its full part in combating climate change, we believe that the Welsh Assembly Government should make a commitment to reducing its overall CO2 emissions by 3% each year. This policy ought to be pursued vigorously by means of fully utilising existing devolved powers; using the opportunities provided by the Government of Wales Act 2006 to devolve powers in appropriate areas, such as electricity generation over 50MW; and maximising the potential for emission reductions arising freductions arising from the Climate Change Bill.

2. Should the emission reduction targets be based on Welsh consumption, or production, or both (i.e should it take into consideration the carbon dioxide generated in Wales [production], or the carbon dioxide emissions that Wales' residents are responsible for, regardless of their source [consumption])?

DEFRA's Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland: 1990-2004' shows that, despite the growing awareness of the threat posed by climate change, carbon dioxide emissions generated in Wales (the 'production' model of measurement) were 2.3% higher than in the base year of 1990. This compared to an overall reduction in the UK of 5.6% during this

period. In July this year, the Assembly's Member's Research Service produced a report, 'Carbon Dioxide Emissions in Wales', which concluded that Wales had the 12th highest per capita CO2 emissions in the world in 2004.

The predominance of industry in Wales is certainly one explanation for why it has relatively high emissions per capita.

The increase in CO2 emissions between 1990 and 2004, however, occurred even though they declined by 11% in the steel and iron sector during this period. The main increases were in the residential (+16%), electricity generation (+15%) and road transport (+9%) sectors. This indicates the need to focus on all sectors if we are to achieve emission reductions.

If the 'consumption' or 'footprint' model is used, Wales performs far better with emissions slightly lower than the overall UK average. This provides a better picture of Wales' impact globally in terms of emissions and resource consumption and is a good indicator of sustainability. We believe it should be used in relation to the Sustainable Development remit of the Welsh Assembly.

This 'production' model is the established way of measuring greenhouse gas emissions at the international, European, UK and Welsh Assembly Government level. We believe it should be retained for this purpose and is, therefore, the most appropriate method of measuring emissions.

Concern about Wales having to carry more than its fair share of industrial emissions could be addressed by a 'weighted' system that would distribute emissions from large point sources, such as steel works and large power stations, equally throughout the country. Thus all CO2 emissions from large power stations would be totalled and allocated throughout the UK on a per capita basis.

Questions specific to household emissions of carbon dioxide

3. What particular challenges does the Welsh Assembly Government face in reducing carbon dioxide emissions from households, and how can these challenges be overcome?

According to DEFRA's 'Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland: 1990-2004', the residential sector in Wales was responsible for 11% of total CO2 emissions and that this sector saw the fastest growing increase in emissions between 1990 and 2004 (+16%). As a proportion of UK domestic emissions, they are estimated to represent 5.4%, which is consistent with the relative populations.

Although there is evidence that the growth in energy demand in the domestic sector in the UK has begun to level off in recent years, the significant improvement in energy efficiency in UK households since the 1970s has not been translated into comparable reductions in overall energy use and CO2 emissions. Some explanations for this include the fact that, as people get wealthier, they buy more energy demanding appliances for their home; they get used to living at warmer temperatures; and people might not adequately control energy use in their buildings by, for instance, correctly setting thermostats or switching off stand-by buttons.

There is also evidence that householders are unaware of the potential for energy saving in their properties. The Parliamentary Office for Science and Technology Postnote on Household Energy Efficiency (October 2005) cites this as one of the main barriers to energy saving improvements. It points out that only 6 million of a possible 17 million homes had cavity wall insulation and that almost half of homes with loft insulation had an inadequate thickness. DEFRA's 'UK Energy Efficiency Action Plan: 2007' also cites 'lack of awareness and motivation' as primary barriers to improvements and points out that "improving energy efficiency is the fastest and most cost-effective means of saving energy and reducing emissions".

We believe that public education about the reasons for and benefits of energy saving should be a leading priority in efforts to improve energy use and reduce associated emissions. When we gave oral evidence to the Welsh Affairs Committee' energy inquiry in 2005, we suggested that there should be a network of energy advice centres around Wales providing "one-stop-shop" free and impartial advice. We are pleased to learn that the Energy Saving Trust is now developing such a network. We would like to see it combined with a Welsh Assembly Government national awareness raising campaign to improve the understanding of climate change and to motivate people to implement energy saving solutions. The Institute of Public Policy Research's recent report on communicating climate change ('Warm Words') advises that "communications must make climate-friendly behaviour inherently sensible and desirable, not merely dutiful".

While the importance of behavioural change and the means of improving it are being recognised, its effective implementation faces a number of barriers. In our consumerist society we are constantly being reminded that we have to consume more and more of this, that and everything if we are to be happy. And, as the IPCC's report on mitigating climate change points out, other barriers include "financing, poverty, limitations inherent in building design and an appropriate portfolio of policies and programmes".

Of the policy options available to the Welsh Assembly Government, the Home Energy Efficiency Scheme (HEES) is particularly appropriate in overcoming the problems of poverty and energy waste. We are pleased that the Assembly Government has increased spending on HEES in recent years but would like to see this increase further and be extended to support domestic scale renewable energy systems. We are disappointed that there is no dedicated grant scheme to support microgeneration in Wales and urge the Assembly Government to give this serious consideration.

It was stated at the September meeting of NASEG (National Assembly Sustainable Energy Group) that a feasibility report on the devolution of Building Regulations is due to go before Minsters this autumn. We urge the Assembly Government to pursue the devolution of Building Regulations as soon as possible in order to improve energy conservation standards in new and re-furbished buildings. It is also vitally important that these Regulations are properly implemented. On May 30th last year, the Guardian newspaper reported that a Building Research Establishment survey had revealed that 43% of all new houses it checked should have been failed by

the inspectors. No building inspector, it seems, has ever been prosecuted for incorrectly approving inefficient homes.

We support the recommendations of the Wales Audit Office report that the Assembly Government should set a clear direction, including targets, to local councils to encourage and support further improvements in domestic energy efficiency.

We recommend the introduction of council tax rebates for households that install cost-effective energy efficiency measures.

4. To what extent has the Welsh Assembly Government been successful in utilising the powers available to it in order to reduce household carbon dioxide emissions?

As CO2 emissions from the household sector in Wales have shown such a substantial increase, it would appear that the Welsh Assembly Government has not been successful. The failure of the Home Energy Conservation Act (HECA) and the Policy Agreements to meet the targets set for local authorities has been hugely disappointing. Despite the HECA target of a 30% reduction in energy consumption in the domestic sector between 1996 and 2007 and the Policy Agreements target of a 12% reduction, local authorities in Wales achieved a reduction of just 8.5%. Surely the Welsh Assembly Government should have taken a stronger line with local authorities that failed to deliver on this important aspect of energy policy. It appears that most local authorities did not even employ a full-tine HECA officer. This gives some indication of the priority that they give to cutting CO2 emissions from the domestic sector. We strongly recommend that the Welsh Assembly Government introduces a new framework, such as fiscal incentives or mandatory targets, for local authorities to deliver on home energy conservation.

5. Could alternative targeting of Welsh Assembly Government financial resources lead to greater household emissions reduction than is currently being achieved? If so, where could additional resources lead to greatest impact?

We recommend increased funding to increase awareness of climate change and the emission reductions that can be delivered by improved energy efficiency and conservation, as previously stated. Similarly, a mechanism needs to be introduced to replace HECA to enable councils to cut energy use in the domestic sector.

6. What examples from other administrations (devolved, UK and overseas) where other means have been used to achieve reductions in household carbon dioxide emissions, could be adopted here in Wales under current powers?

The obvious examples are Merton and Woking Borough Councils as well as the programmes being developed by Ken Livingstone and the London Assembly.

7. In the context of the Government of Wales Act 2006, which further means of reducing carbon dioxide emission from households could only be achieved with the introduction of further legislative competence for the National Assembly for Wales?

The compulsory fitting of solar water heating panels where a boiler is replaced or a house is re-roofed.

The introduction of zero-carbon buildings ahead of the date set by the UK government.

A guaranteed premium price (feed-in tariff) for householders who sell excess renewable electricity generated from their homes to the National Grid.

8. If specific carbon dioxide emissions targets are to be set for Wales, should these targets be subdivided into shares by sector? If so, what share of the total should reductions in households comprise?

A reduction target of 90% by 2050 should be set across all sectors in order to reflect the gravity of the situation as detailed above by the Tyndall Centre for Climate Change Research.

October 5th 2007