THE UK CLIMATE CHANGE PROGRAMME AND EXAMPLES OF BEST PRACTICE

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***Abstract*:** *The UK published a new climate change programme for consultation in March 2000. This sets out how the UK plans to deliver the Kyoto target of a 12.5% reduction and move towards its domestic goal of reducing CO_2 emissions to 20% below 1990 levels by 2010. Measures identified in the programme could cut greenhouse gas emissions to 21.5% below 1990 levels by 2008-2012. The programme includes a range of cost effective policies and measures which reduce emissions and bring wider benefits – to the economy and to people's quality of life.*

The paper discusses in more details some examples of UK best practices in the energy, business, transport and domestic sectors. It also highlights the significant impact of some measures to reduce emissions of the non-CO_2 gases.

The UK Climate Change Programme

1. The UK published a new climate change programme for consultation in March 2000. The Programme shows how the UK plans to deliver the **Kyoto target** of a 12.5% reduction and move towards its **domestic goal** of reducing CO_2 emissions to 20% below 1990 levels by 2010.

2. Measures identified in the programme could cut greenhouse gas emissions to **21.5% below 1990 levels** by 2008-2012. This would be a reduction of **46 MtC**. UK emissions were 8.5% below 1990 levels in 1998.

3. Integration with other Government policies is critical to the success of the programme. The framework is set by the UK's Sustainable Development strategy, and there are close links to other strategies on eg energy, air quality and waste. The programme aims to highlight the way in which policies such as housing, planning and transport are being used to reduce greenhouse gas emissions.

4. The programme aims to deliver emission reductions from all sectors of the economy and all parts of the UK. It shows that significant emission reductions can be made without damaging the economy – and that action can bring opportunities for business. The programmes focuses on cost effective policies which can reduce emissions and bring wider benefits – to the economy and to people's quality of life. Policies can improve energy efficiency and business competitiveness, stimulate development of new technologies and markets, reduce local air pollution, tackle fuel poverty and deliver

warmer and more comfortable homes, improve public health and reduce traffic congestion.

5. The programme includes a mix of policies and measures - economic instruments, regulation, information and advice and financial incentives. It combines national policies and measures with some important EU level measures.

6. As well as reducing emissions for the Kyoto commitment period, the programme aims to prepare the UK to make much more significant reductions in the future. It signals the need to start the move away from a carbon based economy and puts in place incentives (through tax and trading) to stimulate technological change and encourage business to start to make this transition.

UK examples of best practice

Energy market liberalisation and deregulation

7. Changes to the energy market have led to a rapid shift from **coal to gas** in electricity generation and improved efficiency, particularly in the **nuclear** industry.

8. These changes to energy markets were introduced for a range of reasons, but significant reductions in emissions have been a useful additional impact. **CO_2 emissions from the energy supply sector fell by about 20% between 1990 and 1998**. Energy prices have also fallen sharply, with efficiency gains benefitting consumers but reducing the incentive to use energy efficiently. There have also been significant **social costs** to coal communities as demand for coal falls.

9. *But*, the shift from coal to gas has been accelerated by distortions in the market, which have encouraged the construction of new gas-fired plant at the expense of existing coal-fired. The Government has responded by introducing a stricter consents policy for new power stations to protect **security and diversity of supply** while it reforms the market.

Renewable energy

10. The UK aims to deliver **10% of electricity demand from renewables by 2010**, compared to 2.5% at present.

11. The main mechanism for supporting development of renewable capacity has been the **Non-Fossil Fuel Obligation** (NFFO). This has required public electricity suppliers to purchase a proportion of their electricity from renewable sources. Since 1990 it provided over £600 million of support and, as a result, renewables are expected to provide 5% of the UK's energy demand by 2003. NFFO has been effective in establishing an initial market for renewables and driven down costs substantially. The prices of power from NFFO contracts has on average halved since 1990, and the early projects are now operating without subsidy.

12. Changes to the structure of the electricity industry mean that a new support mechanism must be introduced. The UK Government has announced that it will place an obligation on all electricity suppliers to deliver a specified proportion of their supply from renewables, while capping the maximum price they must pay for renewables in order to minimise the impact on consumer prices. Legislation to introduce this is currently going through Parliament.

Improving business energy efficiency

13. The UK is developing an integrated and co-ordinated package of policies and measures to improve business energy efficiency. This aims to combine tax measures, fiscal incentives, regulation, information, and a pilot carbon trading scheme to speed up technological innovation and facilitate business take-up of new technologies and energy efficient practices.

14. A new **Climate Change Levy** on energy use by business and the public sector has been announced. This offers an incentive for all firms to improve their energy efficiency. Energy intensive sectors can qualify for an 80% discount if they take on challenging improvement targets. Revenue from the levy will be recycled to business through a reduction in employment taxes and additional support for energy efficiency measures. The levy package will save about **5 MtC** by 2010, while safeguarding competitiveness of sectors competing internationally.

15. The Government is also working with business to develop a pilot **emissions trading** scheme to enable UK business to gain experience in trading before the international scheme starts. It may offer a financial incentive to encourage companies to take on emissions targets that will deliver additional reductions.

16. The UK aims to design business programme to reflect best practices in other countries, and is encouraging others to do the same through an initiative on exchange of energy efficiency best practice in EU and in support for IEA work on policies and measures.

Reducing emissions from the transport sector

17. The UK aims to reduce emissions by **improving fuel efficiency and managing transport demand**. But climate change is only one driver for transport policy – it is also aims to improve local air quality, cut congestion, and limit traffic growth.

18. Improvements in fuel efficiency are being driven by price signals and technological change. The **EU level voluntary agreements** with car manufacturers to improve fuel efficiency by 25% by 2008 are the most important elements of this strategy and are expected to save about **4 MtC** in 2010. The UK aims to reinforce the impact of the agreements by a package of **fiscal measures**, which increase fuel prices and offer incentives for choosing more fuel efficient vehicles.

19. The most important fiscal measure has been **the fuel duty escalator**. This was introduced in 1993 to give a long term signal to motorists and vehicle manufacturers that fuel duty

would rise in real terms annually. The escalator was introduced at 3% per year, but from 1997-1999 reached 6% per year. Over this period fuel duty more than doubled, and it is estimated that (taken in isolation) the **increases in duties between 1996 and 1999 will save 1-2.5 MtC in 2010**.

20. The UK has also introduced changes to **vehicle taxation** to incentivise a switch to more fuel efficient models. Lower rates of annual vehicle taxation have been introduced for more efficient cars based on CO_2 emissions, while the company car tax regime has been reformed to link the charge to emission levels.

21. The UK's new **integrated transport policy** sets out a package of measures to increase transport choice and change the way people travel. A Bill setting a framework for **local congestion charging** is currently going through Parliament.

Improving energy efficiency in the domestic sector

22. The UK is implementing a package of cost effective policies aimed at **reducing CO_2 emissions and cutting fuel poverty**. It aims to balance social and environmental objectives, targeting many incentives on those on low incomes in poor quality housing.

23. A range of policies are aimed at removing barriers to take-up of energy efficiency measures, including low awareness of the options and benefits; capital availability; and inertia. They are also intended to stimulate development of innovative energy saving services by suppliers.

24. A new **Energy Efficiency Standards of Performance** (EESOPs) scheme was announced in March as the main element of the UK's strategy to deliver savings from the domestic sector. EESOPs are obligations on energy suppliers to assist consumers to implement energy saving measures. By stipulating the amount of energy that must be saved, they leave suppliers to find cost effective and innovative approaches, and to integrate energy saving into the services they provide to their customers.

25. EESOPs have already proved a cost-effective way of stimulating change since they were first introduced in 1994. Research has shown that 3 million people have benefitted from the scheme, and their bills have been reduced by an average of £120 each. These schemes have focused on pensioner and other low-income households, and these same groups will also be given priority under the new EESOP scheme. These groups inevitably take a portion of the energy efficiency benefit in improved comfort in the home, reducing the carbon savings that can be delivered. But savings are still expected and, once these priority consumers have been addressed, the carbon savings from the scheme can be expected to rise over time.

26. The package of energy efficiency measures is expected to deliver **4-5 MtC by 2010**. Besides EESOPs, the package includes grant schemes for domestic energy efficiency measures; upgrading of community heating systems; energy labelling; regulation; and information campaigns.

Non-CO_2 gases

27. UK policies and measures have reduced emissions of non-CO_2 gases significantly. Between 1990 and 2000 emissions of these gases are expected to fall by around **15 MtC** in total. This has been driven by regulation, voluntary agreements, and changes in agricultural practice.

28. Industry has also invested significantly in reducing these emissions. Two particular projects (driven by regulation) have cut UK emissions by 7.5 MtC - worth over 3.5% of UK's baseline emissions. DuPont have installed abatement technology on their adipic acid plant which is reducing emissions by about 98% - or 4 MtC. ICI Klea have installed an incineration unit which is reducing fugitive HFC emissions from HCFC manufacture by over 95% - or 3.5 MtC.

Monitoring

29. The UK's climate change programme is kept under close review . High level indicators, such as emission totals give an indication of the impact of the programme as a whole, but masks the success, or otherwise, of individual policies. The effectiveness of individual policies and measures is monitored to see whether they are on track to deliver the initial estimates of carbon savings and to reassess their impact where necessary.