

# A briefing paper on EU measures to implement the Kyoto Protocol by the Confederation of UK Coal Producers (COALPRO)

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## Background

In its Third Assessment Report of 2001, the **Intergovernmental Panel on Climate Change** (established by the World Meteorological Organisation and the United Nations Environment Programme) presents “*new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities*”. This leads the majority of scientists to believe that prompt and precautionary measures are necessary, though there remains a significant minority of scientists who are sceptical about the extent to which human activity influences the climate.

The international political response to climate change began with the 1992 **United Nations Framework Convention on Climate Change** (UNFCCC) which aims to stabilise atmospheric concentrations of greenhouse gases “*at a level that would prevent dangerous anthropogenic interference with the climate system*”.

Whatever the scientific basis, the political response has now gathered so much momentum that the economic and social value of fossil fuels, including coal, is rarely recognised. A growing number of policies seek to condemn these fuels to history with no clarity on what alternative energy sources might viably replace them.

The UNFCCC has progressed with a number of Conferences of the Parties, and at COP-3 in December 1997, parties to the **Kyoto Protocol** agreed:

- An overall reduction in the emissions of six greenhouse gases (6 GHGs: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs and SF<sub>6</sub>) from developed countries (Annex I parties) of at least 5% below 1990 levels in the commitment period 2008-12.
- Flexibility in achieving the commitments: joint fulfilment; joint implementation (JI) with Annex I parties; clean development mechanism (CDM) with developing countries, *i.e.* non-Annex I parties; and, international emission trading. However, exact details of these flexible mechanisms are yet to be finalised by negotiators.
- Unique emission reduction commitments for each party, including an 8% reduction for the EU to be jointly fulfilled by Member States according to the allocations under the Environment Council’s *burden-sharing agreement* of 16 June 1998. The latter became law on 25 April 2002 (Council decision 2002/358/CE) prior to EC approval of the Kyoto Protocol on 31 May 2002.
- Entry into force 90 days after ratification by 55 parties which account for at least 55% of the total CO<sub>2</sub> equivalent emissions from all Annex I, developed countries. To date, 107 parties have ratified (approved, accepted or acceded) to the Kyoto Protocol accounting for 43.9% of emissions.

Ratification by the Russian Federation (or the USA) would bring the Protocol into force.

The European Commission, the European Parliament and the Council of Ministers agree that the EU should assume a **leadership role** in respect of ratification and implementation of the Kyoto Protocol. The EU’s 8% commitment is being translated into concrete measures by the Commission and is seen as the first step towards a **70% reduction** in global greenhouse gas emissions. In stark contrast, the USA repudiated the Protocol in March 2001, believing that it would damage the US economy and demand too little from developing countries. Note that under the UNFCCC, the USA agreed to return its GHG emissions to 1990 levels by the end of the decade. It failed to achieve this (+11.7% in 1999) and, with no enforcement provisions in the Convention, has switched its attention to reducing emission intensity (tonnes of GHGs per unit of GDP) rather than making absolute reductions.

The Kyoto Protocol left open the question of which greenhouse gas reducing measures could be taken into account in the commitment period 2008-12. Hence, the **Buenos Aires Plan of Action**, agreed in 1998 at COP-4, set a schedule with a COP-6 deadline for reaching agreement on the Protocol’s operational details.

In the event, parties failed to reach agreement at COP-6 held in The Hague during November 2000, so resumed the following summer in Bonn (COP-6 Part II). Although the **Bonn Agreements** were formally adopted, no agreement was reached on key decisions regarding mechanisms, compliance and carbon sinks (in particular, LULUCF - Land Use, Land Use Change and Forests).

A Protocol-saving compromise was reached at COP-7 in Marrakech in November 2001; key features of the **Marrakech Accords** to the Bonn Agreements include consideration of LULUCF principles and limited banking of sink credits under the CDM. At COP-8, held in New Delhi, further progress was made on guidelines for monitoring, reporting and review, and on CDM rules and procedures (except for sinks). The broadening of future commitments to developing countries (non-Annex I parties) was absent from the **Delhi Declaration on Climate Change and Sustainable Development**; the more powerful developing nations, with US support, favouring a declaration founded on adaptation to climate change rather than on mitigation.

The European Commission regards an EU emission trading scheme (ETS) as the principal measure by which the Kyoto targets agreed by Member States can be met most cost-effectively across the EU.

## Commission Proposals

### 1 Climate change: preparing for implementation of the Kyoto Protocol (COM(1999)230, 19 May 1999)

This Communication outlines the political and practical measures which the Commission regards as urgent to enhance its credibility in international negotiations:

- With EU emissions again rising, “business as usual” is not an option, so the Commission calls for common and co-ordinated policies, particularly in transport and energy,

that promote energy saving and efficiency, renewable sources and a switch to “clean” energy.

- Community level policies and measures, including an EU-wide monitoring and verification system, should supplement the national climate change strategies described in National Communications to the UNFCCC.
- Energy taxation and the strengthening of voluntary agreements with industry are needed.
- Reaffirms the Commission’s desire in its Communication of June 1998 to introduce EU emission trading by 2005, ahead of international trading under Article 17 of the Kyoto Protocol scheduled for 2008. Green Paper and stakeholder consultation on policy options planned for 2000.
- EC and Member States should explore how the Kyoto Protocol’s flexible mechanisms may assist developing countries to make emission reductions.

**2 EU policies and measures to reduce greenhouse gas emissions: towards a European Climate Change Programme (ECCP) (COM(2000)88, 8 March 2000) and Implementation of the first phase of the ECCP (COM(2001)580, 23 October 2001)**

In *towards a ECCP*, the Commission proposes:

- to start the political process on ratification of the Kyoto Protocol immediately after COP-6,
- to incorporate into EU law the *burden-sharing agreement* agreed by Council in 1998,
- to develop an implementation strategy for all required policies and measures, including, for example:
  - energy taxation, emission trading (favoured by the Commission because of its compatibility with the Kyoto Protocol), voluntary agreements and technical regulation;
- a list of proposed policy measures (see Appendix 1); and,
- actions to assist developing countries adapt to and mitigate the effects of climate change, including the use of “flexible mechanisms”.
- to set up a steering committee and several working groups concerned with flexible mechanisms, energy, transport, industry and some other relevant themes to assist the Commission make appropriate policy proposals (notwithstanding its right of initiative to do this) - with final, policy-oriented reports due by June 2001.

The ECCP, with its emphasis on the transport, energy and industrial sectors, was welcomed at the Environment Council meeting on 10 October 2000; though Council recalled its conclusions of 16-17 June 1998 by inviting the Commission to make proposals for reducing/removing fossil fuel subsidies as a means to reducing greenhouse gas emissions.

The final report of the ECCP was published in June 2001 and identified 42 specific measures which, if implemented, would amount to a GHG emissions reduction of 664-765 MtCO<sub>2</sub>e/yr, exceeding the EU’s 8% Kyoto target of 340 MtCO<sub>2</sub>e/yr at a maximum cost of €20/tCO<sub>2</sub>e.

**3 Green Paper on greenhouse gas emission trading within the EU (COM(2000)87, 8 March 2000) and Proposal for a directive establishing a scheme for greenhouse gas emission allowance trading (COM(2001)581, 23 October 2001 and modified proposal COM(2002)680, 27 November 2002) and Common Position (CP) agreed on 9 December 2002 following the European Parliament’s first reading on 10 October 2002 (CP amendments shown in blue)**

• From 1 January 2005, Community-wide trading of GHG *allowances* (although only CO<sub>2</sub> will be included at first) to harness the most cost-effective reductions in the sectors covered: energy, metals, minerals, pulp and paper (representing approximately 38% of projected EU GHG emissions). Particular activities at the 4,000-5,000 installations covered include: combustion plants >20 MWth (or smaller), coke ovens, iron and steel making, cement >500 t/d, glass, ceramic, pulp, paper and board production. Note that the Commission proposes that inclusion of other GHGs or inclusion of additional activities should be by way of a Directive amendment (*i.e.* not by regulation), implying a lengthy delay following any proposals the Commission may make by 31 December 2004.

• A “cap and trade” system is proposed with certainty of environmental outcome at the lowest, but uncertain cost (*i.e.* the opposite of taxation).

• Activity will only be allowed in the sectors covered if a GHG emission *permit* is held for a specific installation.

• Trading will be ostensibly between companies who hold installation *permits* and therefore have an obligation to submit for cancellation *allowances* equal to actual emissions at the end of each year. However, any one can trade *allowances* even if they have no obligation to surrender, thus adding liquidity to the market.

• From 2005 to the end of 2007 (*i.e.* before the Kyoto commitment period), emission *allowances* will be allocated free of charge under *national allocation plans* which must be based on common criteria and agreed by the Commission.

• The Commission has yet to decide the method of allocation in the Kyoto commitment period 2008-12, though auctioning is a possibility under regulation (rather than a new directive). **The CP states that at least 90% of allowances must be allocated free of charge.**

• Member States shall determine individual *national allocation plans*: how many *allowances* it intends to issue in each period and how it intends to allocate them to *permit* holders. Criteria to be applied include compatibility with the *burden-sharing agreement*, technological potential of installations to reduce emissions, additionality, State aid, treatment of new entrants and early actions, and public opinion. **In the CP, the Commission commits to developing *national allocation plan* guidance by the end of 2003.**

• Member States must recognise all EU *allowances*. **The CP adds that agreements should be concluded with**

developed countries who have ratified the Kyoto Protocol to recognise their *allowances* similarly.

- Unlimited banking of *allowances* is proposed: within the initial 3-year period and subsequent 5-year periods; and also, between periods (although Member States can decide whether to bank 2005-07 *allowances* into the first Kyoto commitment period).

- In principle, no borrowing allowed, instead a non-compliance fine of €100/tCO<sub>2</sub> (€50/tCO<sub>2</sub> in 2005-08 reduced to €40/tCO<sub>2</sub> in CP) will be imposed and operators would remain liable to surrender *allowances* corresponding to the excess emissions. However, a proportion of allowances for the current year will be allocated by 28 February, one month (two months in CP) before allowances for the previous year must be surrendered - thus enabling some “free” borrowing.

- By 30 June 2006, the Commission may (“shall” in CP) report progress with a view to broadening the scope (activities and GHGs) and harmonisation of the ETS, accompanied by proposals as appropriate.

The Common Position reached by the Council, Parliament and Commission includes new articles and clauses covering the following important amendments:

- “Opt-in” of additional activities and gases: from 2008, Member States may extend trading to cover installations and other GHGs not covered by the proposed directive, subject to the Commission’s approval of environmental integrity.

- “Opt-out” of certain activities: for the period 2005-07, Member States may temporarily exclude installations from the ETS providing equivalent reductions, monitoring and penalties can be demonstrated for these installations as a result of national policies.

- “Pooling”: from 2005-12 operators can pool their installations and nominate a trustee to manage their participation in the ETS.

- A force majeure article for 2005-07.

- Recognition of JI/CDM credits from 2005. It is minuted that the Commission will, during the first half of 2003, propose a directive for linking JI/CDM projects with the EU ETS.

- *National allocation plans* may address the impact of competition from non-EU countries.

The co-decision procedure will continue with the second reading in the European Parliament and a draft recommendation with 14 proposed amendments was issued by the Committee responsible on 9 April 2003 (proposed amendments include: inclusion of all six GHGs from 2005, JI/CDM restrictions, mandatory allocation caps or “trend lines” based on Kyoto Protocol targets, no sectoral opt-outs, opt-ins from 2005, and inclusion of the aluminium and chemical industries). The Environment Committee will adopt its recommendation when it meets on 10 June 2003 prior to the second reading in Parliament. Given the urgency to adopt this directive, it is likely that compromises will be reached during the final stage of the co-decision procedure.

The Commission (DG-Environment) has published a “non-paper” on how *national allocation plans* could be developed (Monitoring Mechanism Committee, 1 April 2003). This will likely be developed into the guidance document due by 31 December 2003. It describes, in broad terms, how a Member State might develop a plan based on a top-down analysis of historical emissions, forecast emissions and least-cost implementation, followed by a bottom-up analysis of current, historical and forecast emissions from individual installations. This analysis would provide Member States with the range of data upon which they must make a decision on allocation: what burden, if any, to impose on the sectors covered by the ETS relative to other, non-covered sectors. Subsidiarity and the fact that Member States are ultimately bound by their individual Kyoto targets (as defined in the *burden-sharing agreement*) mean that each Member State must decide how to allocate allowances, having regard to rules on State aid.

The Commission has published its proposal for a decision on a monitoring mechanism of Community GHG emissions and the implementation of the Kyoto Protocol (COM(2003)51, 5 February 2003). This proposal reflects agreements made at COP-7 in Marrakech on emission monitoring and reporting; aims to extend and harmonise the periodic emission forecasts made by Member States alongside their national programmes; and, implements the *burden-sharing agreement*.

### **COALPRO Position**

#### **1 On the Kyoto Protocol and climate change**

- **Climate modelling and forecasting by the IPCC are subject to a great many uncertainties** such that we do not know if the anticipated doubling of atmospheric CO<sub>2</sub> concentration will mean a rather modest 1.5°C rise in global temperature (beneficial to developed nations) or a more dramatic 4.5°C rise with consequent economic losses as nations adapt. Moreover, analysis of long-term climatic proxy indicators does not provide proof for the dependence of temperature trends on atmospheric CO<sub>2</sub> concentration. For example, the influence of solar fluctuations is poorly understood, yet could have a profound impact on short-term climate cycles. Given this uncertainty, any proposed measures must be properly debated, weighed-up against the alternatives, and balanced with other imperatives, including **economic and social development**.

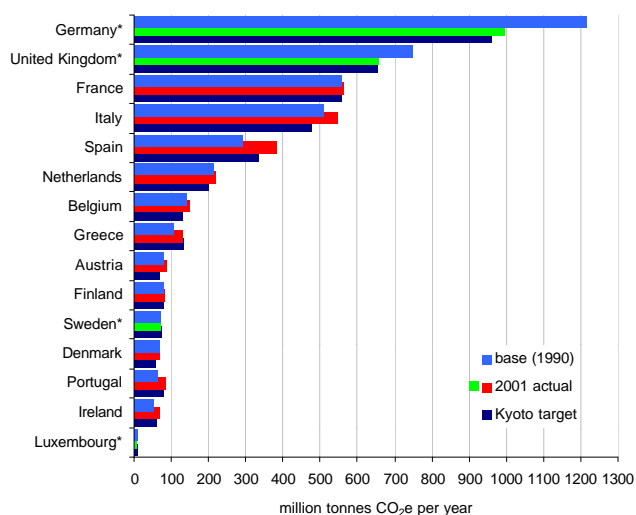
- Implementation of the **Kyoto Protocol** will undoubtedly place a huge economic burden on EU Member States, but COALPRO acknowledges the political desire amongst Member States and the EU institutions to take **precautionary measures against climate change**. In view of this, COALPRO believes the Commission, Parliament and Council should seek to **minimise the cost of compliance** and not seek to follow a different path from that agreed by parties to the Kyoto Protocol. The inclusion of the Kyoto Protocol’s project-based mechanisms (CDM/JI) should be a prerequisite since the United Nations has already largely agreed the principles and modalities of their operation. These mechanisms appear to be particularly well suited to providing the world-wide application of modern energy

technologies, such as clean coal technology where Europe holds a leading position.

- The pursuit of liberalised energy markets in the EU, with tough price competition, benefits consumers but, by creating more demand for cheap energy, conflicts with the need to reduce the environmental impact of all forms of energy consumption.

- **The EU is not on track to meet its 8% Kyoto target** and it is not yet clear whether the public are willing to accept what is necessary to follow a path of drastic reductions in GHG emissions coupled with low economic growth. 11 of the 15 Member States are not on track to meet their agreed share of the EU GHG emissions target, as shown in Figure 1.

- Reduction of greenhouse gas emissions is possible through energy saving and energy efficiency improvements across all sectors of the economy. For example, the efficiency of new, coal-fired power stations has improved greatly over the last ten years. Further efficiency improvements are forecast and will ensure that coal remains a competitive component of a **balanced, diverse and secure fuel mix** in countries which value these attributes.



**Figure 1 - Greenhouse gas emissions and Kyoto Protocol 2008-12 targets under EC burden sharing agreement (only the four Member States shown in green are on path to achieve their respective targets)**

- Any measures adopted in response to climate change must consider all **six greenhouse gases** using life cycle analysis (e.g. from oil well to end use). This is important because life cycle analysis shows that the relative impacts of fossil fuels (oil, gas, bituminous and brown coal) converge such that **only relative small reductions in overall greenhouse gas emissions can be gained by switching between fossil fuels**. Despite this, coal is perceived by governments in some developed countries as the first and easiest target when devising policies to reduce carbon emissions.

- The European Climate Change Programme is, in fact, predicated on the availability of cheap and abundant supplies of natural gas which would allow **fuel switching from coal to gas** at zero cost. The geopolitical risks of relying on imported gas, particularly from Russia and the Middle East, have been partially explored in the Commission's Green Paper *Towards a European strategy*

for the security of energy supply (COM(2000)769, 29 November 2000), but more analysis is needed to assess the remaining life of gas reserves and the future cost of natural gas to European consumers. **COALPRO believes the cost and availability of gas to be the greatest uncertainty in the energy and environmental policies currently being pursued by Member States and the EU as a whole.**

## 2 On emission trading

- Economic modelling carried out on behalf of the Commission (Blok, K. *et al*, *Economic evaluation of sectoral emission reduction objectives for climate change*, March 2001) suggests that the EU's 8% Kyoto target can be met at a marginal cost of €20/tCO<sub>2</sub>e, assuming all six greenhouse gases are traded. Whilst this is less than in previous studies, which considered reductions in carbon dioxide alone (e.g. the PRIMES energy systems model suggests a marginal cost of €33/tCO<sub>2</sub> - Capros, P. *et al*, *The economic effects of EU-wide industry-level emission trading to reduce greenhouse gases*, May 2000), it is equivalent to a **punitive tax on hard coal of €46/t or 125%** of its current market price.

- The same modelling work shows the dramatic fuel switching potential that the proposed emission trading directive aims to release. Compared to a situation in which the fuel mix and efficiency of electricity generation remained the same as in the mid-nineties, switching is expected to reduce emissions by a massive 500 MtCO<sub>2</sub> at no net cost (*n.b.* emissions must fall 331 MtCO<sub>2</sub>e from 4138 MtCO<sub>2</sub>e in 1990/95 to 3807 MtCO<sub>2</sub>e in 2010 to meet the EU's 8% Kyoto target). The modelling shows how 214 MtCO<sub>2</sub> can be saved by replacing existing coal-fired plants with new CCGTs. In broad terms, this means that **coal burn for power generation in the EU must halve by 2010 from today's 230 Mtce**. Such a fuel shift cannot be achieved without cost, as the modelling work assumes. There would be capital costs when replacing existing coal-fired power stations with new, natural gas-fired, combined cycle plants; infrastructure costs to bring additional gas supplies into the EU; costs associated with the loss of competitiveness in the global market place; social costs when jobs are lost in coal mining, power generation and industry; economic costs when stranded investments in existing coal-fired power stations have to be written-off; costs of exposure to gas price risk; and, security costs to ensure the EU gets the gas it needs. These costs have simply not been considered. **COALPRO believes that any policy based on fuel switching to gas is ill-founded at a time when the cost and availability of future supplies are more uncertain than ever before.**

- All the modelling work carried out on behalf of the EC shows, without exception, that unconstrained emission trading will lead to further, massive fuel switching from coal to gas. This helps to explain why certain oil and gas companies have promoted emission trading and even established their own internal trading schemes to influence policy-makers (e.g. BP and Shell). Whilst this reduces carbon emissions at the point of use, although not on a life cycle basis, it does nothing to ensure secure supplies of energy remain available at stable prices.

## Appendix 1

### List of proposed Common and Co-ordinated Policies and Measures on Climatic Change

Source: EU policies and measures to reduce greenhouse gas emissions: towards a European Climate Change Programme (COM(2000)88). Policies and measures marked \* were taken forward in: Implementation of the first phase of the ECCP (COM(2001)580) along with a proposed directive on CDM/JI projects (proposal due spring/summer 2003) and a review of emission monitoring (COM(2003)51, 5 February 2003).

#### 1 ENERGY SUPPLY

- \* Further development of the internal electricity and gas market incorporating environmental considerations.
- \* Access to the grid for decentralised electricity production, increasing the share of renewable energies.
- \* Increase the use of combined heat and power generation.
- Reduction of methane emissions in mining and extraction industries.
- CO<sub>2</sub> capture and disposal in underground reservoirs.
- Promotion of more efficient and cleaner fossil fuel conversion technologies.
- Energy efficiency in the electricity and gas supply industries.

#### 2 INDUSTRIAL SECTOR

- \* Improvement of energy efficiency standards for electric equipment.
- \* Improvement of efficiency standards for industrial processes.
- \* Improved energy efficiency limiting CO<sub>2</sub> emissions (for boilers, construction products, etc.).
- \* Increased energy services for SMEs.
- \* Development of an EC policy framework for fluorinated gases (HFCs, PFCs, SF<sub>6</sub>).
- \* Development of an EC wide policy framework for emissions trading.
- Development of a framework for voluntary agreements.

#### 3 ENERGY CONSUMPTION IN THE DOMESTIC AND TERTIARY SECTOR

- \* Public procurement of energy-efficient end-use technologies.
- \* Energy audits and heating performance certificates.
- Improvement of building/lighting performances.
- Building design and infrastructure planning.

#### 4 ENERGY CONSUMPTION IN THE TRANSPORT SECTOR

- Transport pricing and economic instruments for aviation.
- Fiscal framework as part of the strategy on "CO<sub>2</sub> and cars".

- COALPRO believes any emission trading scheme should have wide scope, in particular the transport, commercial and domestic sectors should not be excluded. **The 70% reduction in GHG emissions targeted by the Commission can only be achieved if emissions from transport are tackled**, yet there are no credible policies to reverse this sector's rising emissions. Instead, the Commission chooses to rely on voluntary agreements with European, Japanese and Korean car manufacturers which would have, if targets are met (and reported results to date are not encouraging), only a modest impact on the rising trend.

- The *burden-sharing agreement* defines not only an EU environmental policy, but also national economic policies for Member States. COALPRO agrees with the Commission's assessments that an EU-wide emission trading scheme may be a flexible and economically efficient means of achieving the environmental objectives of the Kyoto Protocol. However, **all the flexible mechanisms permitted under the Kyoto Protocol should be utilised** so that compliance costs and economic impacts on Member States are minimised.

#### 3 On the European emission trading scheme

- COALPRO believes that because the proposed directive would affect Member States' choice of energy sources and supply structure, **unanimity** of the Council is required for approval according to Article 175, clause 2 of the EU Treaty.

- COALPRO welcomes the new recital 5 of the proposed directive which states that an aim of the ETS is to reduce GHG emissions "*with the least possible diminution of economic development and employment*".

- COALPRO welcomes the stated principle that emission trading is **complementary, not supplementary, to energy taxation** (COM(2001)581).

- Unless all six greenhouse gases named in the Kyoto Protocol are included, the proposed directive's **title is a misnomer**. Indeed, the proposed directive's credibility as a response to climate change is questionable if it only addresses CO<sub>2</sub> emissions.

- **Public consultation** on *national allocation plans* is vital to ensure equitable allocations that properly account for other imperatives such as security of supply. COALPRO believes that too little time has been allowed for genuine consultation.

- **COALPRO supports opt-in / opt-out** clauses where Member States can demonstrate equally effective national actions, such as voluntary agreements and verifiable monitoring arrangements.

- COALPRO believes that free allocation of emission rights with full recognition of early emission reductions since 1990 ("*early action*" in Annex III, 7) is the only way to avoid windfall gains to industry segments, such as nuclear power generation, with historically low GHG emissions. **Free allocations would also properly reward those who invest to reduce emissions through technological progress.**

- Extension of the environmentally enhanced vehicle concept to passenger cars and light duty vehicles (improved emission and fuel standards, new technologies and fuels).

- European campaign for more fuel-efficient driver-behaviour.

#### **5 TRANSPORT POLICY AND INFRASTRUCTURE**

- \* Revision of Transport policy (rail, road freight, model-shift, maritime, aviation).

- \* Green Paper on Urban Transport addressing the growing concern about congestion (incl. pricing, fiscal measures, parking initiatives, improving public transport)

- \* Sustainable mobility and intermodality.

- Satellite assisted navigation systems (GALILEO).

#### **6 WASTE**

- Promotion of biological treatment of biodegradable waste.

- Revision of the Sewage Sludge Directive 86/278/EEC.

- Packaging and packaging waste.

#### **7 RESEARCH**

- \* Implementation of the 5th Framework Programme, in particular the Energy, Environment and Sustainable Development Programme.

- \* Networking of EU, national and other RTD efforts for climate change.

#### **8 INTERNATIONAL CO-OPERATION**

- \* Capacity building and technology transfer to developing countries through international co-operation.

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