

Government advised to reduce Greenhouse gas emissions by at least 80% in 2050

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The Committee on Climate Change (CCC) today advised the Government to adopt an ambitious target to reduce the UK's greenhouse gas emissions by at least 80% in 2050. In a letter sent to Secretary of State for Energy and Climate Change, Ed Miliband, the CCC said that the target should apply on average across all sectors of the UK economy and is achievable at affordable cost of between 1-2 % of GDP in 2050.

UK emissions need to be reduced by at least 80% as a reasonable contribution to a global strategy of cutting global emissions by around 50% by mid-century. Reductions of this scale are required to limit the expected global temperature increases to around 2 degrees centigrade above pre-industrial levels, and to reduce the chances of exceeding 4 degrees centigrade to a very low level (e.g. to less than 1%). Temperature rises above 2 degrees are likely to have a major and increasing impact on human welfare and the natural environment. Temperature rises above 4 degrees centigrade could be catastrophic.

The CCC also advised that the UK's climate change strategy, and the 80% target, should include international aviation and shipping. It also, however, identified practical difficulties in bringing international aviation and shipping within the UK national budget system, at least in the short term. Policies are needed to constrain aviation and shipping emissions, but despite these, it is unlikely that emissions in these sectors will be reduced by 80% in 2050. More effort is likely therefore to be required from those sectors covered by the Climate Change Bill.

Meeting an 80% target or higher will be challenging but feasible based on a range of options for reducing emissions including:

- **Energy efficiency improvement** in buildings and industry (e.g. loft and cavity wall insulation, use of more efficient appliances, turning appliances off and using less air conditioning), which will be particularly important for reducing emissions in the period to 2020.

- **Decarbonisation of the power sector**, starting now and continuing through the 2020s, based on replacing existing conventional fossil fuel fired plant with renewable technologies (e.g. wind, tidal), nuclear new build and CCS.
- **Transport sector decarbonisation**, first through improving fuel efficiency of conventional engines and increased use of sustainable first generation biofuels, with progressive introduction of new technologies such as electric cars, plug in hybrids and hydrogen vehicles, and second generation biofuels.
- **Heat sector decarbonisation** through increased use of biomass in boilers and CHP, air exchange and ground source heat pumps, and modern electric storage heating.
- **Decarbonisation of industry** through the introduction of new technologies such as CCS in cement, iron and steel.

The CCC's Chair Lord Adair Turner said:

“Climate change poses a huge potential threat to human welfare. If we do not act soon, in developed and developing countries, it will become too late to avoid serious and potentially catastrophic consequences. That is why it is so vital that a global deal is reached on climate change and that the UK contributes significantly towards this.

“But we have the potential to reduce our emissions by 80% or more by using energy far more efficiently, by investing in developing new energy sources and by making relatively minor lifestyle changes.

“Using energy more efficiently makes economic as well as environmental sense: many of the changes needed will not cost but save money. And overall, the cost to the UK of meeting our proposed targets will be affordable, and very small compared with the potential consequences and costs of inaction”.

The CCC was asked to provide advice on whether to increase the UK's 2050 emissions reduction from the current 60% target. In answering the question, the CCC reviewed the scientific evidence, made judgements about unacceptable levels of climate change, and considered the appropriate contribution of the UK to a global deal to reduce emissions.

The CCC's full report on the 2050 target and the level of the UK's first three carbon budgets, will be published on 1st December 2008.

ENDS

Notes to Editors

Committee on Climate Change (CCC)

The CCC is being established as an independent body to provide expert analysis and advice on how the UK can meet its climate change goals. The CCC is responsible for advising on the UK's carbon budgets for the period to 2050, and for reporting on progress in reducing emissions to meet these budgets. The CCC is the first body of its kind in the world and is being set up under the Climate Change Bill. The Committee is made up of a team of experts from a range of disciplines and is Chaired by Lord Adair Turner. The CCC's first report, which will include a full scientific and economic analysis of its recommendations on the 2050 target, and which will advise on the level of the UK's first three carbon budgets, will be released on 1st December 2008.

UK Climate Change Bill

The Climate Change Bill now before Parliament commits the UK to reducing emissions by at least 60% below 1990 levels by 2050, and establishes a system of legally binding "carbon budgets" – maximum levels of carbon emissions emitted in each five year period, with the first budget covering the period 2008 to 2012. The Bill also establishes the CCC as an independent body to provide advice on budget levels and progress meeting budgets.

The CCC's initial recommendations are that:

- The world should aim to cut global emissions by 50-60% in 2050 relative to current levels.
- Reducing emissions by this amount will result in a best estimate temperature increase close to 2 degrees centigrade by 2100 but will keep the probability of an estimated 4 degree rise by 2100 at very low levels (e.g. less than 1%).
- The UK's contribution to this should be to reduce emissions by at least 80% below 1990 levels by 2050. This contribution would keep per capita UK emissions at the required global average level in 2050.
- The costs to the UK economy are affordable at 1-2% of GDP in 2050

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