

Ecological Economics

Update: major events and developments since mid-2004

Energy Use

World primary energy consumption increased by 4.3% in 2004. This was the largest annual increase since 1984. In the Asia Pacific region the 2004 increase was 8.9%. By fuel the 2004 consumption increases were:

Coal	6.3%
Oil	3.4% (8.9% for China)
Gas	3.3%
Hydro	5.0%
Nuclear	4.4%

These data are taken from BP's *Statistical Review of World Energy 2005*, published on 14/6/2005, and accessible at:

<http://www.bp.com/downloads.do?categoryId=9003093&contentId=700>

This publication contains a wealth of data on all aspects of the world energy situation.

The rising use of energy was driven by strong growth in the world economy, especially in the Asia Pacific region, and particularly in China. The rising use went with rising energy prices. BP report that, for example, for 2004 the price of Brent crude oil averaged \$38.27 US per barrel about a rising trend, peaking at just over \$52 US in October. Oil prices were also affected by shortages of refining capacity. The rising trend for oil prices continued into 2005. In July 2005 the price for West Texas Intermediate crude went above \$61 US. In June 2005 OPEC increased its members' production quotas with the stated intention of restraining price increases. However, many commentators were doubtful of OPEC's commitment to price stabilisation, and of the effect of this action, since many OPEC members were already producing in excess of their quota. Commentators were divided over the question of whether the world had moved into a situation of permanently high oil prices or not. Some pointed to depletion of low cost reserves and the emergence of China as a major source of demand as meaning permanently high, and rising, oil prices. Others argued that high and rising prices would reduce demand, by reducing economic growth and driving energy efficiency improvements, thus working to stabilise prices. It should be noted that after correcting for inflation, \$60 per barrel is historically high but by no means a new record high for the price of oil. In terms of 2005 \$s US, the price of oil was over 60 per barrel for 1979/1981, peaking at about 90 2005 \$s per barrel in 1980.

BP's *Statistical Review of World Energy 2005* gives data on the size and distribution of global oil reserves for 2004. The overall picture is essentially as reported in the Supplement to Chapter 4 elsewhere on this website. Saudi Arabia, for example, has the largest reserves representing 22% of world reserves: at the current rate of production these reserves will last 68 years. About 60% of world oil reserves are located in the Middle East.

On 7 November 2005 the International Energy Agency (IEA) published the World Energy Outlook 2005 (WEO), which highlights two major tasks: One, producers need to increase investment substantially. Two, consuming countries need to introduce policies to save oil. Even if world governments got tough on tackling the environment and energy security, demand in 2030 would still soar by 37 percent.

The report is not available for free download, but news items summarising it can be found at:

The WEO warns that Global greenhouse gas emissions will rise by 52% by 2030, unless the world takes action to reduce energy consumption. The world has enough oil supplies to last until 2030, and the core issue is the need to improve the supply chain.

<http://news.bbc.co.uk/1/hi/business/4414000.stm>

The WEO calls on OPEC producers like Saudi Arabia to increase their investments to meet a projected 40 percent jump in oil demand by 2030, but acknowledges that some countries may curb output growth, leading to higher oil prices.

<http://www.iht.com/articles/2005/11/07/business/oil.php>

Another interesting recent report is the Renewables Status Report 2005, published by REN21 'Renewable Energy Policy Network for the 21st Century': "The report finds that government support for renewable energy is growing rapidly. At least 48 countries now have some type of renewable energy promotion policy, including 14 developing countries. Most targets are for shares of electricity production, typically 5-30 percent, by the 2010-2012 timeframe. Mandates for blending biofuels into vehicle fuels have been enacted in at least 20 states and provinces worldwide as well as in three key countries-Brazil, China and India."

<http://www.ren21.net/globalstatusreport/default.asp>

Climate Change

Up to date information on developments within the UNFCCC can be found at its website, <http://unfccc.int/2860.php>. Up to date information on the activities and publications of the IPCC can be found at <http://www.ipcc.ch>. Climate change is now getting more coverage by the mainstream news media, and many newspapers and broadcasting organisations have websites which are useful sources of information on developments in climate change science and policy. In the UK the BBC's website, for example, provides such information and links to other relevant and useful sites at:

http://newsvote.bbc.co.uk/1/hi/in_depth/sci_tech/2004/climate_change/default.stm

As noted in the text, many regard the long term implications of prospective climate change as very worrying, in that they may be catastrophic. In February 2005 the UK government hosted a Symposium on 'Avoiding Dangerous Climate Change' and papers presented at it and its deliberations can be accessed at <http://www.stabilisation2005.com/index.html>. The Bioenergy Future Group is concerned to promote the case for biofuels as means to respond should it become apparent that urgent emissions reduction/sequestration is necessary to avoid dangerous climate change – see <http://accstrategy.org/>.

The Kyoto Protocol was ratified by Russia on 18/11/04 and came into force 90 days later on 16/2/2005. The USA has still not ratified the Kyoto Protocol. While the USA has no quantified greenhouse gas emissions reduction commitments at the Federal level, a number of the states have adopted quantified CO₂ emissions reduction targets and/or regulations regarding such emissions. One such is California – information can be obtained at that state's Environmental Protection Agency website, address <http://www.calepa.ca.gov>. (Using Google to search for EPA worldwide turns up lots of the other US states EPAs, as well as EPAs for other countries). Also, Senator John McCain plans to keep re-introducing his bill to force action on greenhouse gas emissions at the Federal level until it passes.

The G8 is an association of 8 industrialised countries (USA, UK, France, Germany, Italy, Japan, Canada, Russia) the leaders of which meet annually to discuss and formulate plans of action on matters of mutual concern. The Presidency of the G8 rotates among the leaders of the member states, and the country which is providing the President in a given year also hosts that year's meeting. For 2005 the President was the UK Prime Minister, Tony Blair, and the meeting took place in the UK (at the Gleneagles Hotel in Scotland) early in July. The official website for this meeting is hosted by the UK government at <http://www.g8.gov.uk> : the BBC gives a good short account of the G8 and of this 2005 meeting, and provides useful links, at:

http://news.bbc.co.uk/1/hi/world/americas/country_profiles/3777557.stm

Tony Blair made it clear in advance that he intended to use the UK presidency to address climate change and poverty alleviation, particularly in Africa. We deal with the latter below. In regard to climate change, the problem was seen largely in terms of involving the government of the USA in steps to address the problem, given its non-ratification of the Kyoto Protocol and the fact that it is responsible for some 20% of global greenhouse gas emissions. The results of the discussions at the 2005 G8

meeting are contained in the Communiqué signed by the leaders of the 8 countries on 8/7/2005. This can be accessed at either of the above websites: the BBC website reports reactions to it and assessments of what was achieved at the G8 summit. In regard to the climate change problem, the general consensus was that the main achievement was to get President G. W. Bush to sign a document which described climate change as ‘a serious and long-term challenge’ and said that ‘human activities’ ‘contribute in large part to increases in greenhouse gases associated with the warming of our Earth’s surface’. The USA did not agree to any quantified targets for greenhouse gas emissions reductions. The G8 leaders agreed to ‘take forward a Dialogue on Climate Change, Clean Energy and Sustainable Development’ and to ‘invite other interested countries with significant energy needs to join us’. Most of the climate change section of the Communiqué spells out the areas that the proposed dialogue will cover. It contains very little in the way of substantial specific new commitments for any the signatories. Most commentators regarded the 2005 G8 summit’s contribution to progress in addressing the climate change problem as very small.

The European Union introduced a carbon dioxide emissions trading scheme on 1/1/2005. It covers emissions sources in the energy, iron and steel, pulp and paper, and minerals industries. All such sources are allocated an emissions allowance by the government of the member state in which they are located. Permitted emissions can be increased by buying additional allowance units from sources that have emissions less than their allocated allowance. Emissions in excess of the amount for which permits are held will be charged at 40 Euros per tonne of CO₂, which sets that as an upper limit on the price at which permits will be traded. The EU legislation allows for sources in the EU to buy, subject to limits set by the relevant member state, allowance credits from outside the EU via the operation of the Clean Development Mechanism. Credits arising from large dam projects and afforestation projects in the CDM are currently excluded from this provision. A useful short introduction to the EU’s ETS (for Emissions Trading Scheme) is at http://www.dti.gov.uk/ccpo/eu_emissions.htm which provides links to other relevant sites: see also

<http://europa.eu.int/comm/environment/climat/emission.htm>.

In the UK the Sustainable Development Commission has recently carried out an assessment of the UK’s progress on meeting its various greenhouse gas emissions reduction commitments – basically it concludes that without further major policy innovations the commitments will not be met. As of mid-July 2005, only a summary of this report was available on the Commission’s website at <http://www.sd-commission.org.uk/> - the full report was promised on the site ‘soon’.

The World Resources Institute’s Climate Analysis Indicators Tool (CAIT) is a useful source of data on many aspects of the climate change problem – see <http://cait.wri.org/>.

Biodiversity Loss and Ecosystem Degradation

The *Millennium Ecosystem Assessment Synthesis Report* was released on 30/3/2005. It can be accessed at <http://www.milleniумassessment.org/en/Products>. The report is the work over a period of 4 years of some 1300 scientists from 95 countries, organised by various UN agencies, international and national scientific organisations, and agencies such as the World Bank. It is a comprehensive description of the ways in which the economy and the environment are interdependent, and an assessment of the current state of the environment. Among the reports major findings and conclusions are the following:

60% of all ecosystem services are being degraded or used unsustainably

humans have changed ecosystems more rapidly and more extensively in the last 50 years than in any other period

10 to 30% of mammal, bird and amphibian species are threatened with extinction

the level of exploitation of fisheries and water systems is well beyond what can be sustained

increasing demand for ecosystem services can be reconciled with reversing the degradation of ecosystems, but requires significant policy changes.

Poverty Alleviation

In July 2004 a World Trade Organisation meeting in Geneva agreed a 'framework' for progressing the Doha trade round. Information on this, and subsequent developments is provided at the WTO website <http://www.wto.org> - click on 'Doha Development Round'.

In May 2005 the EU announced that its members would substantially increase their Official Development Aid, ODA. The 15 richest members agreed to adopt targets of 0.51% of GNI as ODA for 2010, and 0.7% for 2015. It should be kept in mind that 0.7% is the goal first adopted for ODA by OECD members back in 1970 – what these countries actually achieve now is documented in Chapter 10. The 10 countries that joined the EU in 2004 agreed to adopt a target of 0.33% for 2015. It is estimated that this means that by 2010 the EU will approximately double its ODA to about 70 million Euros. It is intended that at least 50% of the new money will go to sub-Saharan Africa.

The 2005 event relating to poverty alleviation that got the most attention was the G8 summit in July. As noted above, the President for 2005, the UK Prime Minister, made poverty alleviation, in Africa particularly, one of two major G8 concerns for that year. It is generally considered that the G8 had more success in regard to poverty and Africa than in regard to climate change. The Communiqué can be accessed at <http://www.g8.gov.uk> or

http://news.bbc.co.uk/1/hi/world/americas/country_profiles/3777557.stm

and the latter site provides background and commentary.

The EU members of the G8 (UK, France, Germany, Italy) used the Communiqué to restate the adoption of the targets noted above. The USA, which currently provides 0.16% of its GNI as ODA, does not accept that targeting a fixed % of GNI is the best way to proceed. According to the Communiqué, it 'proposes to double aid to Sub-Saharan Africa between 2004 and 2010', and to continue with existing aid programmes. Japan stated its intention to increase its ODA by \$10 billion over the next five years, with its ODA to Africa doubling over the next three years. Canada stated that it would double its 'international assistance' from 2001 to 2010, with 'assistance to Africa doubling from 2003/4 to 2008/9'. According to the Communiqué, these G8 commitments together with those of other donors will, compared to 2002, double ODA to Africa by 2010, and increase all ODA by \$50 billion by 2010.

The other main plank of the G8 action on poverty alleviation was in regard to debt relief. As stated in the Communiqué:

The G8 has agreed a proposal to cancel 100% of outstanding debts of eligible Heavily Indebted Poor Countries to the IMF, IDA (World Bank) and African Development Fund, and to provide additional resources to ensure that the financing capacity of the IFIs (International Financial Institutions, ie the IMF, IDA and ADF) is not reduced....

It should be noted that actually implementing this debt relief, which would immediately affect 18 African countries, requires that the IFIs agree to do so. Given that the G8 nations are proposing to finance the write-offs, and their influence on these organisations, it is generally assumed that the debt relief will actually happen.

As well as this action on debt owed to IFIs, some G8 countries have taken, or promised to take, action on debt owed directly to them – bi-lateral as opposed to multi-lateral debt.

The Center for Global Development is a Washington DC based ‘think-tank’ concerned with development issues. It calculates an annual Commitment to Development Index, which assigns a score to each of 21 rich countries for each of 7 areas (e.g. ODA and openness to trade) where such countries can act to promote development in poor countries, and combines these scores to produce an index, which ranks the rich countries. While the scores and rankings should not be taken too seriously, as the methodology can be criticised at several levels, the paper describing the calculations and results contains much valuable data on how rich countries affect development in poor countries. The paper can be downloaded from <http://www.cgdev.org/rankingtherich/home.html>.

The new Human Development Report, which was published on 7 Sept 2005, warns poverty goals likely to be missed. On current trends, the world will achieve a two-thirds reduction in child deaths only by 2045: 30 years later than called for in the Millennium Development Goals (<http://www.un.org/millenniumgoals/>). <http://hdr.undp.org/reports/global/2005/>