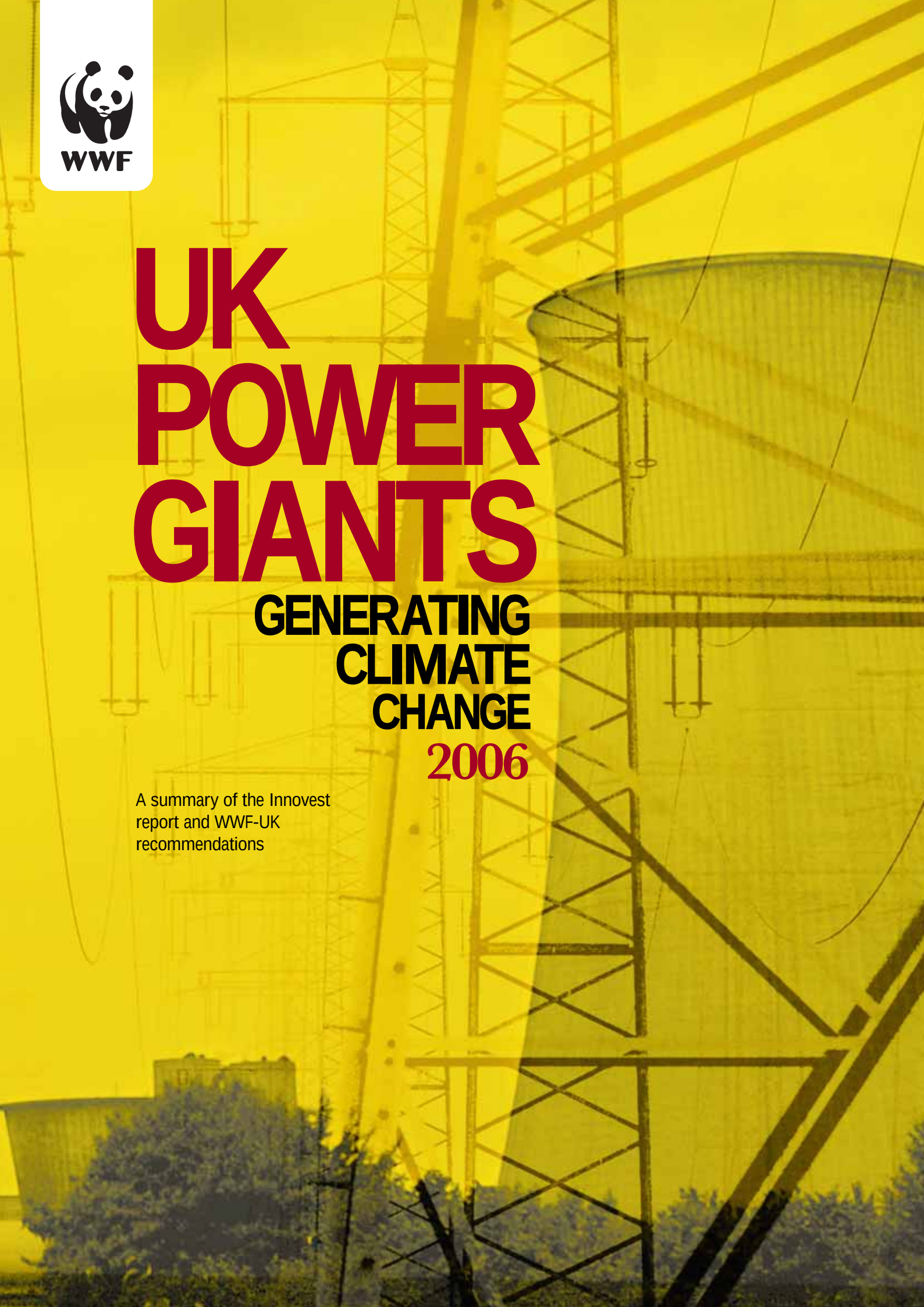

UK POWER GIANTS

GENERATING CLIMATE CHANGE 2006

A summary of the Innovest report and WWF-UK recommendations

Climate chaos

There is clear evidence that recent extreme weather events such as hurricanes, heat waves and flooding are a bitter taste of things to come if climate change continues unabated. Following his announcement that climate change is "the world's greatest environmental challenge"[1], the Prime Minister stated that "all G8 countries agree on the need to make substantial cuts in emissions and to act with resolve and urgency now".[2]

Following pressure from WWF-UK and others, the government pledged to reduce the UK's CO_2 emissions by 20 per cent by 2010 from 1990 levels. But in March 2006, it issued a revised Climate Change Programme which suggested that a cut of just 15-18% would be achieved by 2010. Moreover, despite the urgency of the problem, the government has so far failed to provide the long-term framework required to encourage investment in low-carbon technologies and energy efficiency measures, as indicated by the pending Energy Review.

The next 10 years provide a critical window of opportunity to address the principal causes of climate change – emissions of carbon dioxide (CO_2) and other greenhouse gases. To avoid the most serious impacts, we must ensure that the rise in the global average temperature is kept below 2°C above pre-industrial levels – the critical "tipping point" for people, wildlife and habitats. Government and the business community must therefore show leadership in order to change the way we produce and use energy.

WWF's climate change campaign

WWF's campaign aims to transform the UK power sector in order to achieve a 60% cut in emissions by 2020 and become CO_2-free by 2050. And with good reason: it is estimated that the sector is responsible for 37% of global CO_2 emissions and approximately a third of UK emissions – more than all cars on UK roads.[3]

To help achieve these targets, WWF-UK is calling for year on year reductions in the UK's total CO_2 emissions of at least 3%, and a tough cap on emissions from heavy industry for the second phase (2008-12) of the EU Emissions Trading Scheme (EU ETS).

And as part of its campaign WWF has again commissioned Innovest to analyse the performance of the UK's six major power companies. This year's report is the first benchmarking analysis of what will be an annual study. It assesses the six main UK power companies and their performance, activities and plans relating to emissions of CO_2 and other greenhouse gases, the primary cause of human-induced climate change.

While the research reveals examples of good practice, it is worrying to note that overall, the companies are still failing to exercise sufficient leadership or implement the changes required to tackle climate change.

The companies powering the UK

As we turn on our lights, computers, televisions, washing machines and kettles, most of us give little thought to where our electricity comes from, how it is generated and who is supplying it. Yet in 2005 alone, UK electricity consumption totalled 355,000 GWh[4] (one GWh is enough to power around one million homes in the UK for an hour)[5]. Contributing up to 2% of the UK's Gross Domestic Product (GDP) and supplying more than 26 million households, the power industry is a hugely significant part of the UK economy. It is also an industry that has undergone major change as, until 15 years ago, electricity was generated and supplied by just one government-run company, the Central Electricity Generating Board (CEGB). During the early 1990s, however, the power sector was privatised and liberalised and there are now more than 70 generators throughout the country[6].

In the early 1990s, most electricity in the UK was generated by coal-fired plants, with gas generators representing just 2% of the market. The so called "dash for gas" then led to a rapid reduction in CO_2 emissions which bottomed out in 1999 at 29% below 1990 levels. But since then, emissions from the power sector have shot up due to a return to coal burn and rising electricity consumption (in 2005, coal was the greatest single generator of electricity, fuelling over a third of UK electricity production). The rest of the power sector, including gas, nuclear and a small proportion from renewables, provided 59% of the UK's electricity.

Generating climate change

Globally, the power sector is the single largest source of CO_2 pumped into the world's atmosphere by human activities. An average-sized coal power plant releases about 11 million tonnes of CO_2 every year. Despite the "dash for gas" and the Energy White Paper in 2003 which assumed the downward trend in emissions would continue[7], the government has been forced to admit that UK CO_2 emissions are in fact on the rise again, increasing by 2.2% in 2003 and 1.5% in 2004. Faced with rising oil and gas prices, the UK power sector is switching back to the old coal-fired power stations and purchasing cheaper coal through imports.

Provisional figures show that the UK's total CO_2 emissions have increased by 2.3% since 1997. Most of this increase comes from the power sector, where emissions have soared by 15% since 1997.

To address this dangerous trend in emissions, the government must take radical action; the power sector must also respond and take urgent measures to cut CO_2 emissions and transform itself into sustainable, low-carbon industry.

Following our pilot study in 2005, UK Power Giants: Generating Climate Change 2006 is WWF's first benchmarking report in what will be an annual study of the six major UK power companies. With increased transparency and data disclosure by power companies this year – which WWF acknowledges as a step in the right direction – and clear and comprehensive assessment criteria, this report measures and compares company performance relating to reducing emissions of CO_2 and other greenhouse gases. The research was carried out for WWF by Innovest Strategic Value Advisors, a global research provider assessing non-traditional sources of financial risk and opportunity.

The EU Emissions Trading Scheme (EU ETS)

The first phase of the EU ETS began in January 2005. The aim of this "cap and trade" scheme is to reduce CO_2 emissions from energy-intensive industries in the most cost effective way. If implemented properly by the UK and other EU governments, the scheme has the potential to impact significantly on power companies by influencing their investment decisions towards cleaner fuels and technologies in order to reduce their CO_2 emissions. By putting a price on CO_2, high-carbon investments become more financially risky for companies if the market is functioning effectively. However, as a result of industry lobbying, the caps on emissions across Europe have been set too high and have had little impact on shifting investment away from fossil fuels.

WWF is calling on EU governments to set a tough cap in the second phase of the scheme, which starts in January 2008. In order to ensure that the UK gets back on track to achieve its 20% reduction target, it is imperative that its cap for phase II is set at a maximum of 60.5MtC per annum. This equates to a 11.5MtC reduction from current "business as usual" emissions projections and a 10% cut from the phase I cap.

Key findings

• ScottishPower scored highest in terms of overall rankings, followed by E.ON UK, Scottish and Southern Energy, RWE npower and Centrica. EDF Energy is sector "laggard" in sixth place. There is, however, only a narrow range between the top and bottom scores: all companies must improve their performance to achieve significant and enduring reductions in emissions of CO_2 and other greenhouse gases.

• Centrica came top in terms of absolute CO_2 emissions in the year 2003/04.

• Overall performance on greenhouse gas emissions is led by ScottishPower, followed by E.ON UK, Scottish and Southern Energy, Centrica, RWE npower and, last, EDF Energy.

• ScottishPower, followed closely by E.ON UK and RWE npower, showed best overall emissions reduction trends since 2000, followed by Scottish and Southern Energy, Centrica and EDF Energy.

• Energy efficiency ranking was led by EDF Energy, followed by Scottish and Southern Energy and ScottishPower. These were followed by E.ON UK, RWE npower, and Centrica.

• ScottishPower and E.ON UK are leaders in renewable energy.

WWF calls on the power sector to:

• improve energy efficiency;
• reduce electricity demand through a switch away from bulk energy sales to the provision of energy services; and
• support tighter binding limits on CO_2 emissions from the power sector in the second phase of the EU Emissions Trading Scheme (EU ETS).

WWF calls on the government to:

• set challenging limits on CO_2 emissions from the power sector in the UK National Allocation Plan for Phase II of the EU ETS in order to deliver its long-standing target to cut the UK's CO_2 emissions by 20 per cent by 2010;
• take steps to reduce the UK's electricity demand by reforming the regulatory and market framework to drive a switch to an energy services model; and
• to extend the UK Renewables Obligation to at least 20% by 2020 and 25% by 2025.

WWF also calls on the UK financial sector to:

• respond to the financial risks of climate change by making responsible and informed investments.

Windfall profits

Contrary to expectations and claims by industry bodies that the EU ETS is harming British business, the power sector is actually making windfall profits of at least £800 million a year during the first phase of the ETS.[8]

The fact that three large UK power companies (RWE npower, ScottishPower and Scottish and Southern Energy) have decided to sue the European Commission over its rejection of the UK government's request to increase the cap for Phase I, shows a distinct lack of commitment on the part of these companies to curbing CO_2 emissions and WWF strongly condemns their decision to take legal action.

The main UK power companies

Company profile

Centrica

Centrica is the UK's largest gas supplier. It sources energy from gas, by trading on the energy markets, and through the generation of electricity from gas-fired power stations and wind farms. It also stores gas for producers, suppliers and for its own businesses, and provides energy-related home services.

Through British Gas Residential Energy, Centrica is the largest supplier of residential gas and electricity in Britain, with approximately 54% of the residential gas market (11.1 million customers) and 23% of the electricity market (5.9 million customers). British Gas Business also delivers energy to more than 900,000 commercial accounts.[9]

In 2004 Centrica's group turnover from continuing operations was £11.4 billion and in 2005 it was £13.4 billion.[10] Profits in 2005 were £1.02 billion, compared with £779 million in 2004.[11]

EDF Energy

EDF Energy is part of the EDF Group. Its activities include generation, trading, distribution, supply and other energy services.

EDF Energy generates around 7% of the UK's electricity and supplies energy to around five million customer accounts. The company generates and invests in electricity from natural gas, coal and renewable sources.

Group turnover for 2005 was £4.5 billion and profits before tax for 2005 were £414m.[12]

E.ON UK

In the UK, E.ON UK (formerly Powergen) is involved in electricity and gas retail, electricity distribution, trading in electricity, coal, gas, oil and carbon and the provision of energy services.

Through the Powergen and E.ON Energy brands, its retail business supplies electricity and gas to more than six million customers.

Turnover in 2005 was £7 billion and profits before tax 2005 were £658 million.[13]

RWE npower

RWE npower operates coal, oil and gas-fired power stations and supplies gas and electricity to about six million customers in the UK. npower renewables develops and operates onshore and offshore wind farms, hydro plant and co-firing biomass.

RWE group turnover in 2005 was £28.5 billion and RWE npower turnover in 2005 was £4,361 million. RWE group profits in 2005 were £2.61 billion and in 2004 £2.69 billion.[14]

Scottish and Southern Energy

Scottish and Southern Energy is a utility company with subsidiaries involved in generation (including from gas, coal, hydro-electric power and other renewables), transmission, distribution and supply of electricity, energy trading, gas storage and supply, electrical, environmental and utility contracting, domestic appliance retailing and telecoms.

Scottish and Southern Energy has around a 10% share of electricity generated in the UK.[15] It serves more than six million gas and electricity customers through four supply brands in the UK.[16] It supplies energy to 6.5 million customers, distributes gas to 5.6 million customers and electricity to 3.4 million customers.[17]

Scottish and Southern Energy's group turnover in 2005 was in excess of £7.42 billion and in 2004 was £5.1 billion.[18] Group profits before tax in 2005 were £858m.[19]

Scottish Power

ScottishPower provides electricity, transmission and distribution services and supplies more than 5.2 million electricity and gas services to homes and businesses across the UK. It operates electricity generation and gas storage facilities in both the UK and US.[20]

External group revenue in 2005/06 was £5.4 billion and in 2004/05 for continuing businesses was £4.59 billion.[21] Profits in 2005/06 were £805 million and in 2004/05 for continuing businesses was £580 million.[22]

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Results 1

Ranking Methodology – an overview

The following criteria, some of which encompass a number of variables, were used to compare power company performance:

- CO_2 (assessed as CO_2-equivalent) policy and emissions improvements;
- renewable energy programmes and installations, renewable capacity investments and Renewables Obligation compliance;
- energy efficiency and demand-management measures; and
- existing combined heat and power (CHP) capacity.

Improved disclosure and participation by companies in this year's survey has meant that Innovest was able to make a more in-depth analysis, allowing this report to serve as a benchmarking study.

CARBON DIOXIDE EMISSIONS IN THE PAST YEAR

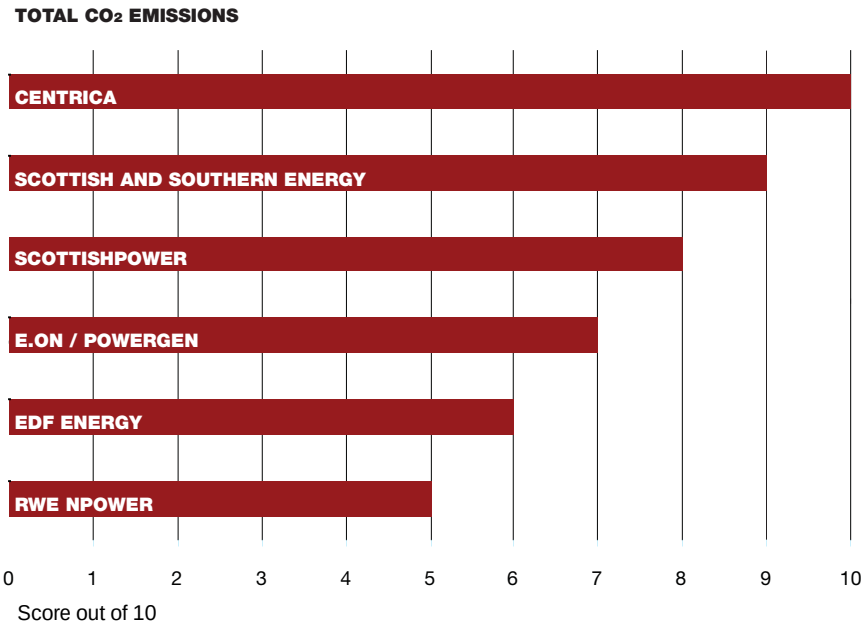
WWF considers that "actual emissions" are a useful indicator of a company's commitment to move as a matter of urgency towards a sustainable business model, and this study highlights the relative performance of the six major companies in terms of past emissions.

The variables used to determine the companies' performance on emissions reductions of CO_2 and other GHG emissions are:

- CO_2 emissions management policy;
- switching to low emission fuels;
- total CO_2 emissions; and
- CO_2 emissions improvements in 2003/04.

Centrica, Scottish and Southern Energy and ScottishPower are top of our ranking in terms of lowest total CO_2 emissions in the year 2003/04.

However, further significant improvements should be demanded even of the better performers and WWF will continue calling on government and the power sector to improve their emissions reduction performance in the years ahead.



2004-05 CO_2 emissions, whereby Centrica, Scottish and Southern Energy and ScottishPower electricity production rank top in terms of low carbon emissions intensity.[23]

2

ENERGY EFFICIENCY

In the spring of 2005 the government's Energy Efficiency Commitment (EEC) came into force. Under its first phase (EEC-1, 2002/05), suppliers were required to set up schemes to promote and deliver energy efficiency measures to residential consumers. Half of such measures had to be delivered to "fuel-poverty groups" characterised by low income levels.[24]

In this study, criteria around energy efficiency contribute to the qualitative assessment of the companies but do not influence their ranking. This is due to lack of detailed disclosure by companies and the commercial sensitivity of information relating to EEC investments and activities. Although the effects of energy efficiency measures on CO_2 emissions are less pronounced than the effect of increased generation from renewables, they do closely relate to energy services which can and should become an important instrument for reducing consumer demand.

Compliance with Energy Efficiency Commitment target

The diagram below shows power sector ranking with respect to performance on EEC-1. We compared "over-compliance" with EEC-1 targets and the range of services each company offered.

All companies reported over-compliance with the regulator's requirements. The highest degree of energy efficiency performance for the EEC-1 was noted for EDF Energy, followed by Scottish and Southern Energy, then ScottishPower and E.ON UK. RWE npower and Centrica fared less well on this variable.

Consumer education/electricity demand management (energy services)

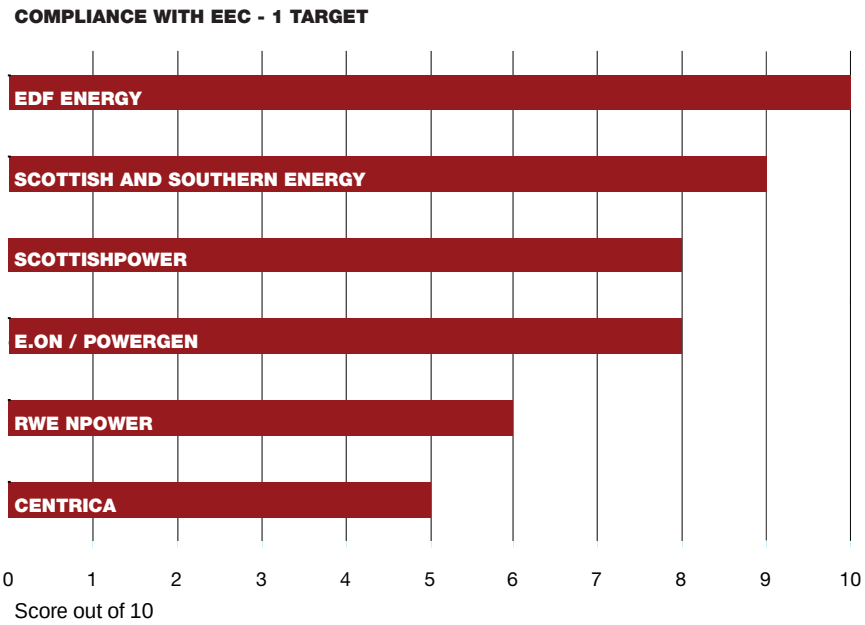
Scottish and Southern Energy performs well, and is followed closely by ScottishPower, RWE npower and EDF Energy. WWF is lobbying companies to develop comprehensive strategies to provide education and energy services to consumers.

Energy Service Companies (ESCOs)

At present, energy supply companies have a strong incentive to sell as much electricity and gas as they can. WWF is calling for a major shift in this business model to encourage the major UK power companies to transform themselves into providers of energy services. Under this vision, the companies would become ESCOs and offer micro-generation, energy efficiency and combined heat and power (CHP) schemes.

Reducing UK energy demand and increasing small-scale low-carbon electricity and heating schemes is a key element in reducing our dependence on large, centralised generation such as coal-fired and nuclear power stations. Market transformation of the power sector is crucial to achieving the goals of CO_2 emissions reductions, energy conservation and fostering new and profitable renewable, energy efficiency and CHP industries.

Previous efforts to promote ESCOs have been hampered by the fact that present market structure and regulation is based around provision of energy as a commodity rather than as part of an integrated approach to energy services. Transforming the EEC on gas and electricity supply companies into a supplier cap and trade scheme – as recommended by the Energy Saving Trust – has the potential to revolutionise the delivery of energy efficiency measures. Placing a cap on total gas and electricity supply would force supply companies to embrace a new, exciting business model based on provision of energy services.



3

RENEWABLE ENERGY

The Renewables Obligation (RO), introduced in April 2002 as the government's main mechanism for supporting renewable energy technologies, provides a market incentive for all eligible forms of renewable electricity. The RO requires licensed electricity suppliers to source a specific and annually increasing percentage of the electricity they supply from renewable sources. The current target is 5.5% for 2005/06, rising to 15% by 2015/16.

One key question concerns "additionality" – the degree to which companies act over and above government legislation: some "green electricity tariffs" simply involve customers paying a premium to help power companies meet the Renewables Obligation, while others are not "green" at all.[25]

The renewable energy criterion in this report has been assigned relatively high significance because renewable generation can offset greenhouse gas emissions directly and investment in renewables demonstrates a long-term strategy towards reducing emissions.

Performance in this criterion also shows the widest variance of all criteria, and highlights the need for the power sector to turn its full attention to renewable energy generation.

Centrica and ScottishPower are leaders in renewable energy investments. For example, ScottishPower stated in its 2005 Sustainability Report that it is supporting full commercial trials of the Pelamis wave energy converter at the European Marine Test centre in Orkney.

Scottish and Southern Energy has had the largest volume of renewable energy installed and ranked highest in this variable, with generation from hydro-power and two wind farms forming a large part. RWE npower and E.ON UK also performed well. Centrica has the highest ranking in terms of meeting the RO, having surrendered Renewable Energy Certificates (ROCs) instead of paying into the buy-out fund. WWF-UK supports the surrendering of ROCs as this will create a competitive market that would promote investment in renewables. E.ON UK and Scottish and Southern Energy also show good RO compliance.

Overall, companies are improving their renewable generation capacity in line with government regulation aimed at increasing the total renewable generating capacity in the UK. Yet targets are not strong enough as WWF-UK is calling for a Renewables Obligation of at least 20% by 2020 and 25% by 2025.

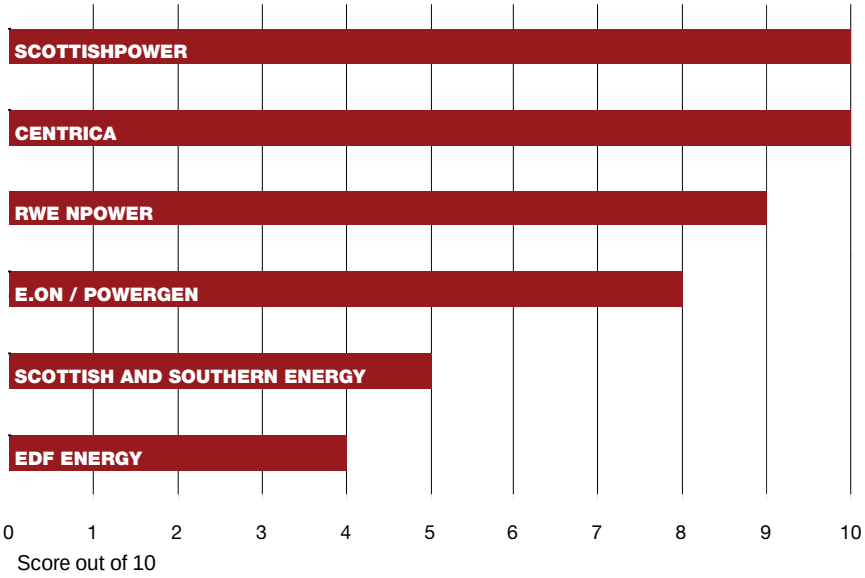
4

COMBINED HEAT AND POWER

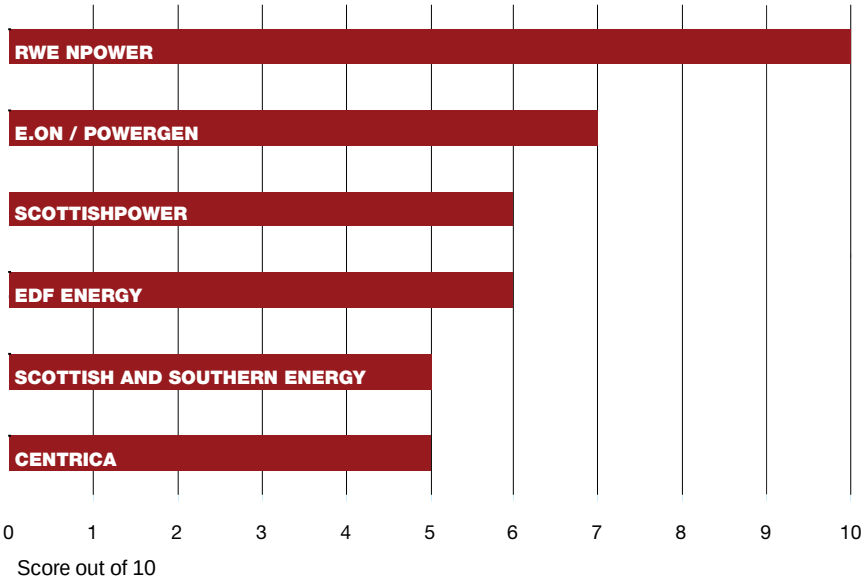
Whereas last year's study did not rank CHP performance owing to lack of data and disclosure by the power companies surveyed, improved disclosure this year has allowed us to measure existing installed CHP capacity. Current energy market conditions remain unattractive and provide no incentives to develop additional CHP capacity in the UK.

RWE npower has the greatest CHP capacity installed, followed by E.ON UK, ScottishPower and EDF Energy.

RENEWABLE ENERGY INVESTMENTS



CHP CAPACITY



Currently installed CHP capacity

5

COMPANY RANKING – FIVE-YEAR PERFORMANCE

The UK power sector has a key role to play in helping transform the UK into a low-carbon economy. While total UK CO_2 emissions have reached 5.3% below 1990 levels, since 1997 emissions have risen by 2.3% overall and by a full 15% by the UK power sector.

In contrast to the 2005 Innovest report, and owing to improved company disclosure and the refinement of criteria used, no company this year can claim outstanding overall sector leadership. Despite clear variations in performance in some of the variables listed above, with clear signs of increased effort and investment in some companies over others, the range in overall performance between the six major companies was narrow. Overall, ScottishPower was ranked first, followed closely by E.ON UK, Scottish and Southern Energy and RWE npower. Centrica came fifth and EDF Energy is the “laggard” in sixth position.

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Overall Assessment Matrix

Summary Ranking

Ranking	Company	Summary results
1	ScottishPower	ScottishPower is the peer group leader, with a diversified and balanced approach to managing its exposure to greenhouse gas emissions in general and to CO_2 in particular. CO_2 emissions per volume of sales were reduced by more than 11% since 2000 – this is significant given that the company has historically exhibited one of the highest carbon-intensities of the power companies covered by this report. ScottishPower has a strong renewables investment commitment but lags behind Scottish and Southern Energy in terms of renewable generation capacity, although it claims that £1bn has been earmarked until 2010 for commissioning and operating new renewable capacity. It has participated in a range of clean technology research and development programmes.
2	E.ON UK	The CO_2 emissions trend of E.ON UK has improved since 2004. It has a large-scale renewable technology investment programme and increased CHP efficiency. Although E.ON UK has complied with its EEC regulatory obligation, it is behind most of its competitors in terms of actual percentages. It is slightly below Scottish and Southern Energy and RWE npower in terms of its renewable generation potential, and having met about 90% of its RO through ROC surrender, is second after Centrica with regard to its ability to generate renewables through internal investments. The company is committed to a sizeable and increasing investment in renewable generation post-2005.
3	Scottish and Southern Energy	Scottish and Southern Energy has maintained its leading position with regard to total installed/planned renewable capacity, fuel switching record and EEC-1 performance, with energy efficiency measures higher than average relative to its peers. However, absolute CO_2 emissions continued to rise; this is attributed to the company's shift towards more coal-intensive production.
4	RWE npower	RWE npower achieves high scores for greenhouse gas abatement policy, better than average consumer training in energy efficiency and a diverse portfolio of carbon/clean technology research and development at the UK level. When adjusted for the volume of sales, its renewables operating capacity also places RWE npower second after Scottish and Southern Energy.
5	Centrica	It is noteworthy that Centrica's greenhouse gas emissions management policy and internal energy efficiency measures remain among the best-in-sector. However, Centrica's fifth position in 2006 is largely due to CO_2 emission increases per volume of sales of approximately 12% between 2003 and 2004, as well as variable emissions trends since 2000; this report has attributed lower significance to the high-performing carbon-intensity of Centrica's existing assets than the 2005 report did. In the absence of fuel-switching capacity, the company has not demonstrated how it plans to offset its increased emissions: although it has the best pledged investment in renewables, this does not automatically translate into offsetting CO_2 emissions growth.
6	EDF Energy	An increase in GHG emissions, limited installed renewable generation capacity and the lack of fuel-switching activity have placed EDF Energy as the "laggard" in sixth position in 2006. It lacks a coherent, target-oriented GHG emissions reduction policy, has limited CHP activity despite some minor operations, and has the lowest installed renewables capacity of all UK electric utilities. Yet it has committed investments in renewable energy, progressed in offsetting its GHG emissions through investment in CDM projects.[26] It received the highest score on its EEC-1 over-compliance and continued its successful operation aimed at fuel-poverty alleviation.

TIME TO ACT

Immense financial and carbon savings are possible in the power sector – if the political will and the sector's foresight exist to make them happen. The risks, if the power companies do not adapt, are equally huge – to society, business and the environment.

Indeed, the leading insurance market, Lloyd's, recently stated in its report Climate Change: Adapt or Bust, that "climate change is likely to bring us all an even more uncertain future. If we do not take action now to understand the risks and their impacts, the changing climate could kills us".[27] In July 2005 Allianz, one of the biggest financial companies in Europe, announced it would be adapting its business at board level to account for the risk of climate change, and Lloyd's recommends that climate change "must guide and counsel business strategy – including business development and planning".

WWF key demands of the UK power sector and power companies

WWF is calling on the UK power sector, responsible for 30% of the UK's total CO_2 emissions, to improve its performance. In particular, we are calling on companies to demonstrate a clear interest in, and bolder steps towards, transforming their business into one which supplies energy services. This would reduce demand for electricity and heat and ultimately reduce carbon emissions significantly. Such steps would include the following measures and activities:

• Support tighter binding limits on CO_2 emissions from industry (including the power sector) through a strong National Allocation Plan (NAP) in Phase II of the EU ETS. Power companies should:

- support an NAP that is set at a level which ensures delivery of the 20% CO_2 emissions reduction target for 2010 (this equates to an annual cap of 60.5MtC);
- support the use of the maximum amount of auctioning (10%) in Phase II of the ETS and then 100% auctioning in Phase III and beyond; and
- drop their legal action against the European Commission to increase the cap for phase I of the ETS.

• work with WWF and others to ensure that the government addresses the barriers to energy services, and assesses the feasibility of implementing a tradable cap on energy supply, as proposed by the Energy Saving Trust;
• engage more actively with their customers to reduce their electricity and heat demand and wastage (for example, encourage business and domestic customers to install "smart" metering in their buildings to monitor and assess their activities with regards to electricity and heat consumption);
• produce and adopt meaningful company-wide CO_2 reduction targets;
• ensure investments in renewable energy technologies/assets are sufficient to meet a given power company's share in achieving at least 20% of UK electricity by 2020, and 25% by 2025;
• make significant commitments to increase energy-efficiency of existing power plants;
• make extensive commitments to increase the uptake of gas-CHP; and
• make no new investments in new coal-fired power stations unless they have carbon capture and storage (CCS). New gas-fired power stations should be made CCS-ready.

WWF key recommendations for the UK finance sector

WWF is calling on banks, insurance companies, pension fund managers and other asset managers to respond to the financial risks of climate change by:

• acting on this and other assessments of power companies' carbon performance;
• switching investments to companies in all sectors which manage their carbon footprint responsibly;
• building in climate-risk assessments across their investment portfolios; and
• making government aware of the threats climate change poses to their business and calling for stronger action.

Banks should also refer to WWF's best practice benchmarking and policy analysis report Shaping The Future of Sustainable Finance.[28]

Furthermore, WWF's partner, the Carbon Disclosure Project (CDP), demonstrates growing interest from the global investment community in information on how companies are managing the risks and opportunities climate change presents to their business.

The CDP website – cdproject.net – is the largest registry of corporate greenhouse gas emissions in the world. All its data, as well as CDP reports, can be downloaded without charge.[29]

WWF key demands of the UK government

Another recent report commissioned by WWF-UK, The Balance of Power, by independent consultants ILEX (May 2006),[30] shows that by cutting electricity demand and waste, and increasing the amount of electricity sourced from renewable energy technologies, the UK power sector could readily reduce emissions by 55% by 2025 from 1990 levels.

To help meet its own target of 20% reductions in CO_2 emissions by 2010, WWF is calling on the government to implement the following new and improved policy measures in order to ensure significant cuts in carbon emissions from the power industry:

- Set challenging limits on CO_2 emissions from the power sector in the UK National Allocation Plan for Phase II of the EU ETS. In order to meet this target, the annual cap should be set at around 60.5MtC, and the maximum amount of auctioning – 10% in Phase II and 100% in Phase III and beyond – should be used.
- Exhibit leadership by working to influence other EU countries to set tougher National Allocation Plans.

As part of the Stop Climate Chaos coalition, WWF is calling on the government to impose a "Carbon Budget" in order to meet its own target of a 60% reduction by 2050. This would mean a commitment to reduce UK greenhouse gas emissions by an annual average of at least 3% over a cycle of three to five years: this would limit UK emissions and ensure all sectors of the economy meet their share of achieving this target.

The government should:

- Take responsible and significant steps to reduce the UK's energy demand by assessing, piloting and implementing the following proposals:

- introduce new fiscal and regulatory measures to overcome barriers to a wide uptake of energy services and so encourage electricity and gas suppliers to offer energy management services;
- commit to increased support and investment for the swift uptake of many more CHP and community heating schemes in the UK in order to meet the target of 10GW of CHP capacity by 2010; and
- introduce new measures to ensure UK power companies are doing all they can to encourage business and domestic customers to reduce electricity and gas consumption and wastage. Examples include widescale trialling and funding of smart meters, council tax rebates in more boroughs and reduced stamp duty measures and incentives.

In addition, the government should:

- extend the Renewables Obligation to at least 20% by 2020 and 25% by 2025;
- establish assessment criteria to ensure that green electricity tariffs are credible and additional – for example, the European EUGENE Standard accreditation scheme – and manage such a programme; and
- ensure that no new coal-fired power stations are built unless they have CCS, and to ensure that new gas-fired power stations are made CCS ready.

Innovest

Innovest is an internationally recognised investment research and advisory firm. It specialises in analysing companies' performances on environmental, social and strategic governance issues, with a particular focus on their impact on competitiveness, profitability and share price performance. Innovest has developed a carbon-profiling database which enables comparisons of management strategies and emissions profiles to be made among companies in a consistent, systematic way. The database contains a series of variables to assess climate change performance, weighted according to their importance within particular sectors.

© 2006 WWF-UK. This report by Innovest was researched and produced based on company information and emissions data available at the time of research (early 2005) and so does not include the 2005 emissions data published later in 2006 by the DTI. Further analysis will be necessary to assess whether emissions recorded in 2004/05 would affect the ranking of these companies.

Disclaimer

The evidence referenced in this report is based on research undertaken by Innovest Strategic Value Advisors (Innovest) on whom WWF-UK has relied for its accuracy. The opinions expressed in this publication are those of the authors and do not necessarily reflect the views of WWF.

[1] PM's speech on climate change, 14 September 2004, www.number10.gov.uk/output/Page6333.asp
[2] Avoiding Dangerous Climate Change (p7) www.defra.gov.uk/environment/climatechange/internat/pdf/avoid-dangercc.pdf
[3] New figures reveal scale of industry's impact on climate, David Adam and Rob Evan, The Guardian, 16 May 2006.
[4] Consumption of electricity 2005 (provisional),Availability and Consumption (ET 5.5), Electricity sales, Table last updated 25 May 2006, www.dti.gov.uk/energy/statistics/source/electricity/page18527.html
[5] Electricity Generation Facts and Figures Paper from OFGEM, www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/14588_elecgenfactsfs.pdf?wtfrom=/ofgem/press/fact-sheets.jsp
[6] All Electricity licensees - Registered Addresses, OFGEM, 12/06/06
[7] DTI. February 2003. Energy White Paper. Our energy future – creating a low carbon economy.
[8] Implications of the EU Emissions Trading Scheme for the UK Power Generation Sector to DTI, IPA Energy Consulting, November 2005
[9] www.centrica.co.uk/files/pdf/corp_profile.pdf
[10] www.centrica.co.uk/files/reports/2005arep/index.asp?pageid=8
[11] www.centrica.co.uk/files/reports/2005arep/index.asp?pageid=18
[12] EDF Energy Financial Summary, www.edfenergy.com/html/showPage.do?name=edfenergy.about.financial.til
[13] p12, Group reports and accounts for the year ended 31 December 2004, www.eon-uk.com/Pdfs/reports/E.ON%20UK%20plc%20-%2031%20Dec%202004%20-%20signed%20accounts.PDF
[14] Financial statements 2005 of RW AG, www.rwe.com/generator.aspx/property=Data/id=306550/jahresabschluss-en.pdf
[15] www.scottish-southern.com/ssegroup/GenerationIntro.asp
[16] www.scottish-southern.co.uk/shareholder/CompanyProfile.asp
[17] www.scottish-southern.co.uk/ssegroup/ssegroup.asp
[18] www.scottish-southern.co.uk/Shareholder/ReportsAndPresentations/PDFs/AR2005/SSE%20Annual%20Review%202005.pdf
[19] Scottish and Southern Energy Annual Review 2005, www.scottish-southern.co.uk/SSEInternet/
[20] www.scottishpower.com/pages/aboutus/
[21] www.scottishpower.com/pdf/annualreview05/Annual_Review_0405.pdf
[22] Annual Report and Accounts 2004/05, www.scottishpower.com/pdf/annualreport2005/Annual_Report_Accounts_0405.pdf
[23] The table shows best performance as a 10/10 score
[24] The Energy Efficiency Commitment (EEC) requires power companies to encourage and assist their domestic customers to make energy savings through taking measures such as installing cavity wall and loft insulation, energy-efficient boilers, appliances and light bulbs. The first (2005-08) stage of the Commitment requires electricity and energy suppliers to achieve a certain target in their customer efficiency, equivalent to an overall cumulative household emissions reduction of 1%. In 2008-11, the government proposes that this level should be doubled. In looking at these results it should be noted that the EEC does not require companies to actually install energy efficiency measures, but merely to provide the necessary equipment. The Commitment as it stands therefore does not necessarily lead to reductions in emissions.
[25] Some green tariffs feed into funds which are not directly linked to renewables but to energy efficiency measures.
[26] The CDM allows companies to invest in greenhouse gas reduction measures in developing countries which are not bound by the Kyoto Protocol, and claim these credits under the EU ETS. Whilst the CDM may be a potentially important part of the global carbon market, WWF-UK believes that the priority is for developed countries to make the bulk of their emission reductions at home rather than relying on imported credits. We also believe that strong priority should be given to credits from renewable energy and energy efficiency projects which meet high sustainable development criteria.
[27] 'Climate Change Adapt or Bust', www.lloyds.com/NR/rdonlyres/E1269AFE-79F2-41A7-BAA6-29574ABB319/0/360climatechangereport.pdf
[28] www.wwf.org.uk/filelibrary/pdf/sustainablefinancereport.pdf
[29] www.cdproject.net
[30] www.wwf.org.uk/filelibrary/pdf/ilex_report.pdf

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The mission of WWF is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:
· conserving the world's biological diversity
· ensuring that the use of renewable natural resources is sustainable
· reducing pollution and wasteful consumption

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WWF-UK registered charity number 1081247 A company limited by guarantee number 4016725
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