

HSBC carbon neutral pilot project



HSBC 
The world's local bank

About climate change

“...climate change represents the largest single environmental challenge this century. It will have an impact on all aspects of modern life. It is, therefore, a major issue for our customers and our staff, as well as for every organisation on the planet, no matter how large or how small.”

Sir John Bond, HSBC Group Chairman, speaking at the launch in April 2004 of the Climate Group, an international non-governmental organisation.

The atmosphere is warming at a rate not seen for 10,000 years. The impacts of climate change are potentially devastating. The Inter-Governmental Panel on Climate Change, established by the UN, believes there is no longer any reasonable doubt that climate change is a reality and that human activities are largely responsible for increasing concentrations of greenhouse gases in the earth's atmosphere.

If emissions are not curbed, warming trends will accelerate further. The negative consequences to life on earth will be profound. Natural ecosystems, both marine and terrestrial, will be adversely affected, as will human communities.

HSBC's response

On 6 December 2004, HSBC made a commitment to become the world's first major bank to achieve carbon neutrality, by 2006. To take this forward, we have put in place a Carbon Management Plan, which consists of three parts: to manage and reduce our direct emissions; to reduce the carbon intensity of the electricity we use by buying 'green electricity' where feasible; and to offset the remaining emissions in order to achieve carbon neutrality. Our offsets will have to be credible, genuinely incremental and cost-effective.

Group-wide emission reduction targets, announced in July 2005, commit HSBC to reducing its carbon dioxide emissions by 5 per cent by 2007. To co-ordinate the implementation of the plan, HSBC has set up a Carbon Management Task Force spearheaded by the Group Chief Executive, Stephen Green. The task force comprises HSBC's Corporate, Investment Banking and Markets' Project Finance, and Energy and Utility Sector teams; Credit and Risk; Corporate Real Estate; and Group Corporate Affairs. The task force is advised by the Climate Group and ICF Consulting, an international consultancy.

As a 'dry run', HSBC is offsetting its Group-wide emissions for the last quarter of 2005. Allowing for a 5 per cent margin of error, the total emissions amount to 170,000 tonnes of carbon dioxide. To offset these emissions, HSBC has bought 170,000 tonnes of carbon offset credits from four offset projects around the world. The average price per tonne of offset amounts to US\$4.43. Details of each project are set out on the following pages.

During the last quarter of 2005, data will be collected to ensure HSBC's systems for becoming carbon neutral are robust and credible. Den Norske Veritas, the international verification firm, have been retained for the period of the dry run to assess the quality of our systems and suggest improvements, ahead of the target date of January 2006.

Project 1

Name	Te Apiti wind farm
Location	North Island, New Zealand
Carbon reduction	125,000 tonnes

Te Apiti is Meridian Energy's first wind farm, located north of the Manawatu Gorge on North Island, New Zealand. Situated on 1,150 hectares of farmland, the project consists of 55 turbines with a capacity of 1.65 megawatts each. The wind farm is capable of generating enough electricity for 45,000 average-size homes.

The Manawatu Gorge area has an abundant supply of wind energy. Since the turbines began supplying power, Te Apiti has been operating at around 45 per cent of maximum capacity compared with an international average of only 30 per cent.

Te Apiti is one of the first projects validated by the Gold Standard, which many environmental non-governmental organisations regard as the most credible certification scheme for carbon emission reduction. Gold Standard certification ensures both additionality and the greatest sustainable development benefits.

Project 2

Name	Organic waste composting
Location	Victoria, Australia
Carbon reduction	15,000 tonnes

This waste-composting project reduces the potential of the waste to create negative environmental impacts. If the waste was placed in landfill, it would create methane, which can escape and produce a greenhouse warming effect. By composting the waste using aerobic methods, methane is not produced but carbon dioxide, which has a smaller global warming potential, is generated instead.

The emission reduction credits are issued by the Australian Greenhouse Friendly scheme, which has rigorous rules for the calculation of carbon offsets and the avoidance of double-counting. The verification of carbon offsets is carried out by an independent party approved by the Australian Greenhouse Office.



A worker examines organic compost at a waste-composting plant. 5

Project 3

Name	Sandbeiendorf agricultural methane capture
Location	Sandbeiendorf, Germany
Carbon reduction	14,000 tonnes

In Germany, cattle and pig manure is normally stored either in open tanks or in lagoons before being applied to farmland. During storage, significant amounts of harmful methane are emitted into the atmosphere as the result of uncontrolled anaerobic digestion processes in the manure.

Under the project, fresh manure is no longer stored in this way. Instead, it is fed into a biogas plant and converted into renewable heat and electricity by an attached combined heat and power generation unit. Overall, methane emissions are reduced by approximately 90 per cent.

Furthermore, a smaller amount of carbon dioxide is produced by replacing the use of fossil fuel for heating agricultural buildings with renewable heat from the combined heat and power unit. This project also produces a lower level of emissions though converting the methane into carbon dioxide.

Project 4

Name	Vensa Biotek biomass co-generation
Location	Andhra Pradesh, India
Carbon reduction	16,000 tonnes

The project aims to generate four megawatts of electricity from agricultural biomass – replacing the power drawn from India’s Andhra Pradesh state electricity grid – for the production of liquid glucose and starch. Surplus power is also exported to the state grid.

This project has multiple benefits for the local population. The co-generation facility augments renewable resource-based power supplied to the state grid. This reduces not only greenhouse gas emissions, but also particulate emissions and ash generation associated with the burning of coal, which is a major fuel in Andhra Pradesh. By feeding additional power to the state grid, the project improves the reliability of power supply and stabilises the voltage. The business opportunities created help the economic development of rural Andhra Pradesh.



The Vensa Biotek biomass co-generation facility in Andhra Pradesh, India.

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Photographs courtesy of the four carbon offset projects.

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