



CARING FOR CLIMATE: TOMORROW'S LEADERSHIP TODAY

Climate Change,
Environmental Responsibility
and Examples of Corporate Leadership



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July 2007

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The Global Compact

Launched in 2000, the UN Global Compact brings business together with UN agencies, labor, civil society and governments to advance ten universal principles in the areas of human rights, labor, environment and anti-corruption. Through the power of collective action, the Global Compact seeks to mainstream these ten principles in business activities around the world and to catalyze actions in support of broader UN goals. With over 3,000 participating companies and hundreds of other stakeholders from more than 100 countries, it is the world's largest voluntary corporate citizenship initiative. For more information, please visit www.unglobalcompact.org

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World Business Council for Sustainable Development

The World Business Council for Sustainable Development (WBCSD) is a CEO-led, global association of some 190 companies dealing exclusively with business and sustainable development. The Council provides a platform for companies to explore sustainable development, share knowledge, experiences and best practices, and to advocate business positions on these issues in a variety of forums, working with governments, non-governmental and intergovernmental organizations. Members are drawn from more than 35 countries and 20 major industrial sectors. The Council also benefits from a global network of about 60 national and regional business councils and regional partners.

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FOREWORDS

FOREWORD

UN GLOBAL COMPACT

Georg Kell, Executive Director



“The importance of early action is increasingly recognized – particularly in today’s globally integrated world.”

The Global Compact’s commitment to environmental protection is firmly embedded in its foundational spirit and three environmental principles. The rise of climate change as a fundamental issue for society has emphasized the need for leadership and voluntary action on the environment.

The importance of early action is increasingly recognized – particularly in today’s globally integrated world where the ability to compete is more and more linked to a company’s capacity to innovate and demonstrate viable solutions for increasing energy efficiency and reducing carbon emissions.

It is increasingly clear that ignoring climate change implications and delaying proactive responses are not viable options if long-term financial success and societal benefits are to be assured. It is true that proactively and comprehensively addressing climate issues will challenge established business practices. However, the alternative – not taking action – would certainly be enormously disruptive both through sudden, unpredictable shock, perhaps to supply and demand, as well as longer-term effects.

While voluntary efforts can never be a substitute for government action, they can accelerate the process of solution finding and inspire consumers, peers and policy makers to have the courage to face the climate challenge as early as possible.

Against this background, the UN Global Compact, UNEP and the WBCSD have joined together to illustrate how innovation and the search for practical solutions can drive change. It is our hope that “Tomorrow’s Leadership Today” will inspire others and send a clear signal that responsible business can pay.

Georg Kell
Executive Director
UN Global Compact Office

FOREWORD

UNITED NATIONS

ENVIRONMENT PROGRAMME

**Achim Steiner, UN Under-Secretary-General
and Executive Director, United Nations Environment Programme**



“It is good to see examples of corporations introducing climate strategies and communicating these widely alongside a commitment to evolve targeted action over the medium and long term.”

Climate change is the “leadership challenge of the 21st century” and is central to the goals of the UN Global Compact. There is currently a proliferation climate-related initiatives world-wide led by governments, civil society and last but not least business and industry. One of the challenges is to combine these efforts to greater and long lasting effect. The Intergovernmental Panel on Climate Change (IPCC), established by UN, has given us the science, likely impacts and costs of combating climate change. In doing it has illuminated the path governments, the private sector and the general public can take together to reduce their energy and carbon footprints for stabilizing the atmosphere.

Technological solutions and investments in cleaner production are one answer as are changes in the way we utilize infrastructure such as buildings and transport, consumption patterns and management practices. New business models and management tools are critically important. Their cumulative impact is essential in complementing new regulation and economic instruments. It is therefore good to see examples of corporations introducing climate strategies and to these being communicated widely alongside a commitment to evolve targeted action over the medium and long term. One of the excellent opportunities afforded by the UN Global Compact is the opportunity for business leaders to share ideas across sectors and different regions. Today China and India are homes to some of the largest solar and wind energy companies. The market for resource efficiency and clean energy is ready to move to the next level.

Public policy leaders are responsible for ‘setting the rules of the game’ post 2012. The private sector is looking to governments for one that allow corporations with climate-friendly policies and business models to thrive and to innovate. 2007 has seen unprecedented momentum on the climate change challenge – these will feed into forthcoming negotiations under the UN climate convention. I am sure that the climate statement and the case studies outlined in this publication will – alongside the political momentum – be an inspiration to others. I would like to thank the UN Global Compact Office and the World Business Council for Sustainable Development for joining with UNEP in this forward-looking call to action.

FOREWORD

WORLD BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT (WBCSD)

Bjorn Stigson, President

Creating a sustainable world will depend on our ability as a global society to “get a few things right”. This publication shows how a number of companies are trying to act responsibly in terms of energy and climate change.

Their actions are encouraging. They demonstrate engagement with the challenge, an ability to innovate and some of the various ways in which companies can make energy savings and carbon management a profitable part of core business.

These actions also show the limits to business acting on its own without serious government policies that require and reward energy efficiency and a decarbonizing of the global energy system.

Yet as a global civilization, we lack the shared perception that we have a real problem that must be addressed with some sense of urgency. Governments seem unwilling to work together to actually do something about it. They do not yet feel real pushes from public opinion in their home countries and do not yet see this issue as a factor in their ability to stay in power or be elected. We also lack a feeling that there should be an equitable sharing of the costs for solving the problem.

Despite this, we do possess realistic options for solutions. These include technologies that can create a more resource-efficient economy and/or can eliminate the waste from resource use, such as carbon capture and storage.

And we do possess the tools to implement the solutions. These include regulations that stipulate what activities are allowed in society, efficiency standards for products and processes, taxes and fees that influence the prices of resources, goods and services. These can also involve voluntary actions by citizens and business.

I deeply hope that these compelling examples of what business is already doing will encourage governments to work together in a spirit of shared burden to use the options and tools available to them to provide civilization with energy and climate security.



“We do possess realistic options for solutions and we do possess the tools to implement the solutions.”



INTRODUCTION

CLIMATE CHANGE, ENVIRONMENTAL RESPONSIBILITY AND BUSINESS:

Taking New Business Opportunities and Advancing Cleaner Development

This publication contains a collection of company good practices and a leaders statement on climate change, developed in a process facilitated by the UN Global Compact, United Nations Environment Programme (UNEP) and World Business Council for Sustainable Development (WBCSD). It was undertaken with a view to the Global Compact Leaders Summit, held in July 2007. It forms part of an inspired dialogue, which is very timely.

Record summer temperatures and natural disasters serve as an ongoing reminder of the climate change debate. Though global warming will entail new business opportunities, the overall costs and risks of climate change will be equivalent to at least 5% of global GDP annually, today and in future, if we do not act now, according to the 2007 *Stern Review*. Businesses in many parts of the world are looking more closely at ways of improving their resource and energy efficiency, while accounting for their greenhouse gas (GHG) emissions with greater care and examining the emerging markets for emissions trading and carbon-offsetting projects. The race is on for available and affordable sources of clean energy with markets for wind and solar power doubling in size every two years. For companies in developing countries, there is the prospect of new business and financing through joint ventures with foreign companies to jointly reduce greenhouse gas emissions.

Yet while larger multinationals in high impact sectors may be better prepared to face the challenges, many companies in non-energy sectors and of smaller sizes still need guidance on the nature of the climate change issue, its implications for their businesses, and how they can address the issues through changes in processes, technologies, products and services they deliver. Against this background, a session on "Climate, environmental responsibility and business" was held at the Global Compact Leaders Summit on 6 July 2007. It provided high-level participants with a forum to share learning experiences and reflect on the needs of business in dealing with the risks and opportunities associated with global climate change. Discussions considered how business can contribute to finding solutions by managing risks, by promoting a climate-friendly economy and by sharing good practices and know-how.

Clearly, a low-carbon economy is the economy of the future. Scientific evidence and economic analysis confirm the need for rapid, radical changes in the global energy system – an enormous challenge. The stakes are high. There is a pressing need for action and for solutions in the developed and developing world alike.

The next few years are crucial to establishing policies to deal with energy security, competitiveness, GHG mitigation and adaptation to climate impacts, and they will determine our energy infrastructure and GHG emissions for the next century. Delay will only exacerbate the challenge and increase costs to society. The solutions may require some reinvention as we adapt to the new dynamic. It will create winners and losers. It will demand international cooperation and partnerships and clear roles for government, business, the consumer and civil society to help us all understand what can be done individually and collectively.

Additional scaling up is required now across several fronts. The private sector is the major source of capital and innovation that can transform the global energy system with competence, drawing on business innovation and organizational ability. Yet business cannot develop and deploy the technologies needed on such a scale without help from government. International policy efforts must align with long-range business investment cycles. A broad and efficient mix of policies and programs targeted at mitigation and adaptation

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A quantifiable, long-term goal for the management of global GHG emissions with clear interim targets must be established as soon as possible.

and complemented by supportive regulation and governance frameworks will reduce investment uncertainty and assist business in its role.

A global goal and action plan for the longer-term

International efforts on climate change must accommodate a multiplicity of approaches and recognize the sovereign nature of national energy policy decisions. At the same time, these efforts must establish a global context to guide the making of such decisions. A quantifiable, long-term goal for the management of global GHG emissions with clear interim targets must be established as soon as possible. This will assist in reducing current levels of uncertainty and build business and consumer confidence to support technological development and deployment. A long-term goal can be used to establish short-, medium- and long-term global targets for absolute GHG reductions. This can guide the establishment of national GHG- and energy-based objectives or targets and the use of market-based instruments to introduce true cost pricing for both carbon and ecosystems impact. Creating value for GHG reductions, elimination or avoidance will protect our ecosystems and natural capital and send the required economic signals to the capital markets.

An international framework that builds up from local, national, sector or regional programs will help close the clean energy investment gap that would otherwise exist after the first commitment period of the Kyoto Protocol expires in 2012. The new framework would feature a global goal and recognize that integrated energy and climate policies are set, in the first instance, at the national level. National or sector programs must be able to link to evolving international GHG markets to introduce flexibility into the attainment of national or sector objectives.

Broader participation of developed and developing countries needs to be achieved through flexible national and multi-sector approaches recognizing that growth elements are necessary for developing economies. Sector-specific business and industry organizations or associations have an important task in improving capacity building support for participation by business and industry from developing countries.

Reducing GHG emissions requires an economy-wide approach. A truly sustainable energy strategy must give balanced emphasis to competitiveness, energy security and the environment. And while much can be done with existing technologies, current R&D expenditures are not sufficient to address the sheer scale of needed low- and zero-GHG technologies. R&D expenditures will have to be reprioritized, giving due consideration to cleaner, low-emissions and non-emitting technologies. Effective scale-up and deployment of technologies across power generation, mobility, industry, buildings and goods and services will also have to be encouraged with a greater sense of urgency.

Business willing to engage

Climate change is one of the most critical challenges facing our world. A number of companies have stated their commitment to helping governments act swiftly to develop and implement energy-related measures that are benchmarked against the threefold objectives of competitiveness, energy security and environment. This is based on recognition of the need to:

- Encourage technology development to introduce change into the energy system;
- Further develop approaches to foster the deployment of current best practice and existing technology;
- Support a more rapid deployment for new energy technologies than would otherwise be the case.

No one entity alone can address the environmental, economic and technological issues inherent in any solutions. The companies that have already stated their commitment intend to lead in finding pragmatic and sustainable solutions by:

- Pursuing energy and process efficiency across their operations;
- Benchmarking the GHG impacts of their products and services;
- Promoting awareness and understanding, among their stakeholders and customers, of energy issues and GHG emissions through their product and supply chains.

The above comes with a commitment to being open about business challenges and dilemmas in delivering a low-carbon economy. It also asks for continued direct engagement between decision-makers from both the public and private sector on:

- Understanding the scale, risks and nature of transitions associated with various stabilization pathways toward a low-carbon economy;
- The possible solutions and ways to implement public goals, mindful of the potentially severe costs of inaction;
- The design of programs that will lead to the required reductions in GHGs, at the same time delivering the long-term certainty business needs to invest and operate worldwide.

As evidenced by the climate agenda set for the July 2007 Global Compact Leaders Summit, low- and zero-GHG technologies must be developed, rapidly commercialized and deployed. Policies must be adapted to the types of technology targeted to address the technical, cost and acceptance challenges. In terms of technology development, this has implications for investment in research and development, baseline investments in innovative energy technologies, and the use of public-private partnerships and multilateral financing mechanisms. In terms of technology deployment, this will require new infrastructure projects for leading-edge, low-carbon technology through incentives and programs to mitigate long-term investment risk, improved usage of financial markets, sustainable purchasing and procurement initiatives, as well as education programs targeting end-users and consumer behavior, among others.

In addition to the enabling regulatory environment, alternative technologies and their use ultimately need to be backed up by new ways of conducting business and new business models. This brings participants in the UN Global Compact back to the broader goal of sustainable production and consumption, and the role of an alternative vision and strategy in both private and public organizations. The collection of case studies that follows gives an indication of how leading companies are approaching this challenge.

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COMPANIES TAKING ACTION ON CLIMATE

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Seriously addressing the climate challenge requires a preparedness to publicly express a vision and strategy, to make specific commitments, to set examples, to strengthen execution capability, to enhance public disclosure and to conduct pro-climate advocacy. This applies to governments and business alike, as behavioral change in society-at-large, including by end-customers and investors, is of crucial importance. Voluntary initiatives and the concept of “making markets work for climate” need an appropriate regulatory framework as well as an informed and engaged society in order to function. Being seen as a best practice leader on the right issues in one’s chosen markets will undoubtedly offer business leaders reputational value in their relationship with clients, shareholders and employees, particularly young professionals.

The global climate challenge is affecting every part of society, so “thinking inclusive and big” is essential. As renewable energy technologies come of age, business is challenged to make greater advances in energy efficiency and the introduction of cleaner technologies. Addressing climate change offers space for value creation through genuine leadership. Cleaner products and services show the way in taking on new market opportunities and realities. Examples from the electronics and household goods sector include “ecomagination” by General Electric, “EcoVision” by Philips and “Eco products” by Sony. A number of international business associations, including the WBCSD and others, have shown leadership and are exercising due pressure via their constituents. Companies from sectors such as finance, tourism, building and construction, and information and communications technology have also joined UNEP in voluntary initiatives to promote best practice in new technologies and life cycle approaches to advance more efficient resource use and dematerialization. All of these turn climate risks into opportunities involving alternative business models and cleaner development.

Looking at recent top corporate sustainability reports, one can see examples of leading companies introducing “climate change campaigns”, “CO₂ strategies”, “climate strategies” and “climate action plans”. This shows companies moving beyond ad hoc efforts to comprehensive strategies and targets and reporting progress on these. It signals an opportunity for leaders to employ the Global Compact Performance Model and assess how climate can be addressed strategically, creating targeted results and impacts in the value chain and society. For small enterprises, this could involve basic steps such as more efficient use of resources, recycling, installing energy-efficient light bulbs and more efficient electricity use to reduce power bills. For a public institution, it can take the form of reducing air travel, making greater use of teleconferencing and improving building heating and cooling systems, all steps that if executed and monitored systematically help pave the way to climate friendly economy.

The following pages give examples of action taken by individual companies that are finding new ways of displaying environmental responsibility as encouraged by the UN Global Compact. It includes two company contributions from the services sector.

The insurance industry has been paying growing attention to climate change since the early 1990s, when 18 companies signed the “UNEP Statement of Environmental Commitment by the Insurance Industry”. Our collection includes an update from **Allianz** on steps taken and progress made with its climate strategy. Its comprehensive action plan includes 17 objectives and 80 measures for each of its main business areas, as well as for in-house ecology and communication. The CEO has overall responsibility.

Reminding us of the gains that can be made by intelligent use of information and communications technology, **Deutsche Telekom** provides a description of its Desktop Video Conferencing Service. This can save money and time while avoiding both travel-related risks and GHG emissions. More companies are today setting targets for cutting staff travel through greater use of both tele- and videoconferencing, using new technological advances in this field.

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Leadership in technology

innovation can make a world of difference in the successful implementation of an international agreement.

Electricité de France, for its part, highlights the advantages of clean energy through hydropower development in Laos. As part of its commitment to a sustainable development approach, the EDF Group seeks to balance economic development with a high level of service, environmental protection and social equity. Laos, where 70% of its 5.6 million people live on less than US\$ 2 a day and have little or no access to basic services, says the dam is crucial to lifting its people out of poverty. The Lao government is expected to earn nearly US\$ 2 billion in revenues over a 25-year operating period, most of it from power sales to neighboring Thailand.

New technologies present new challenges in terms of improving their energy efficiency and appropriate use by consumers. This can be seen from the example of **Ericsson**. Applying life cycle analysis, Ericsson is making good progress in addressing the energy efficiency of its radio base stations (RBSs), the infrastructure for mobile phone use and Ericsson's largest volume product. Based on its own targets, RBS products from 2006 onwards will help save about 2.2 million metric tons of CO₂ during their average 10-year lifespan. "Energy teams" measure progress quarterly and report on key performance indicators. Convinced by the business case, the company is extending its life cycle approach across its entire product portfolio.

The introduction of cleaner fuels and alternative fuel mixes, including the use of waste by-products, can be seen in the case from **PETROBRAS**. The Brazilian energy company gives examples of its efforts to advance energy efficiency, renewable energy technologies, emissions control and related research and development (R&D). From 2006 to 2008, the company is investing US\$ 15 million in 30 carbon sequestration and climate change R&D projects, through a "Climate Change Mitigation Technologies Network" involving 10 Brazilian universities and R&D institutions.

Denmark's **Novo Nordisk** is building its climate strategy on three pillars: increasing productivity and thereby lowering energy consumption per produced unit, identifying and implementing energy savings and converting to renewable energy supplies. The company believes that being prepared for a carbon-constrained world is an act of due diligence. An early response to the climate change challenge is an act of leadership. Combining the two is sound business. To reach its goals, the company has, among other important acts, signed an agreement with WWF to join its Climate Savers program, demonstrating that investing in reduction options can benefit the long-term health of the business.

The Australia-based multinational **BHP Billiton**, giving an example of technology innovation, shows how a pilot project in Australia helps to significantly reduce GHG emissions while saving money. It involves the capture of methane from coal mine ventilation and its conversion to electricity. The project demonstrates that high volumes of mine ventilation air with very low concentrations of methane can be effectively treated to reduce the associated GHGs emitted and capture waste heat as an energy source.

Supporting new, more climate friendly technologies, **Unilever** is involved in a partnership project with UNEP and others to promote refrigeration technology that is both ozone and climate friendly. Ice cream freezers, used for storage and display at the point of sale, commonly still use hydrofluorocarbons (HFCs) as refrigerants. HFCs have a significant global warming potential (GWP) in the atmosphere. Unilever committed to implement, by 2005, a non-HFC purchasing policy for ice cream freezers. Successful implementation of this policy meant a close working relationship with suppliers. Unilever developed training materials to facilitate the acceptance and safe handling of the new freezers using "natural" hydrocarbon refrigerants, which have significantly less impact on global warming. By the end of 2006 Unilever had 100,000+ cabinets in the market globally. The company has already replaced 32 tons of HFCs with hydrocarbons, and foresees potential for a further 300 tons over the coming years.

Contributing to the implementation of the UN climate change convention, **Veolia Environnement** provides an example of a Clean Development Mechanism (CDM) project. It is responsible for the operation of a comprehensive waste management system in Alexandria, the second biggest city in Egypt, with more than 5 million inhabitants. It includes gas recovery at two landfills and is expected to reduce GHG emissions by approximately 3.7 million tons of CO₂ equivalent over a 10-year period. The project is helping the company gain experience in the development and certification of CDM GHG reduction projects.

Underlining the value of a collective and industry sector based approach, the **Cement Sustainability Initiative (CSI)** describes actions by a group of WBCSD member companies to further develop and apply their GHG emissions measuring and reporting protocol and shared CO₂ emissions database. Developed in cooperation with the World Resources Institute, the protocol has also been used to specify the related indicators included in the Global Reporting Initiative guidelines for sustainability reporting. In 2007, CSI member companies agreed to provide independent 3rd party assurance of their CO₂ emissions, even though many companies do not operate in policy regimes that require this. The CSI has embarked on an ambitious data collection program to build an international database of CO₂ emissions tracking emissions plant-by-plant. The analysis of this data will help the companies understand the various policy options a sector approach may offer.

The World Bank Group: International Finance Corporation provides an example of investment in the fuel cell industry. This industry has started to move from its traditional focus on the transport sector to looking seriously at stationary power, which has greater applicability for the developing world. From applications such as fuel cells for telecom tower installations in Africa, its project work has confirmed the importance of field trials in developing countries. Value lies also not in the monetary reward, but rather in establishing long-term relationships with the local partner company.

These examples of corporate leadership in addressing the climate challenge show what can be accomplished by getting strategy and organization in place, investing in relevant R&D, raising consumer awareness, working with partner organizations and helping suppliers join the effort, making efficiency gains through new technologies, as well as reporting against internationally recognized performance indicators and doing pilot projects in support of international agreements. They provide a snapshot of what "Tomorrow's Leadership Today" involves.

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ALLIANZ GROUP

“Climate change creates significant costs for the financial industry. In the interest of our clients and shareholders we are obligated to take these risks into account when making decisions on insurance underwriting, investments or lending credit.”

Joachim Faber,
Allianz SE Board Member
and CEO of Allianz
Global Investors

Background Allianz Group has a two-fold responsibility: the company needs to be prepared for the negative effects that climate change may have on its business and customers; it can also help significantly mitigate the economic risks and enter the low-carbon economy by providing appropriate products and services.

Reason For Action Climate change will most probably affect different business lines such as property insurance, the marine aviation business line and life and health insurance. For example, the storm Kyrill that hit Europe in late January 2007 caused net claims of around €350 million. The storm left large areas of Europe with significant damages – most of them involving buildings and vehicles. Clearly, climate change will influence insurance underwriting and product development.

Climate policy could have repercussions on casualty insurance, investments and asset management. It has already enabled new products and services such as emission trading brokerage and consulting provided by Dresdner Bank. Allianz Group investors have already identified for investment the renewable energy market, which is growing from a niche market to mainstream.

Asset managers have a duty to look at all risks, including climate change, which may affect the client's investments. In the end, carbon risk will be a market risk. Thus Allianz must balance the short-term with the long-term risks.

Process, Action Taken Allianz has set up a climate strategy based on an action table that emerged from its first climate change report in cooperation with WWF. The study was conducted in 2005 to evaluate the implications of climate change on Allianz's business.

Michael Diekmann, CEO of the Allianz Group, has overall responsibility for the topic of climate change on the Board of Management. The climate strategy is to prioritize and focus on developing Group responses to climate risks and opportunities. Most recently, in May 2007, the Allianz Executive Board decided to establish “Allianz Climate Solutions” as a 100 percent subsidiary of Allianz SE. Faber explained that, “As professional risk managers, we want to bundle our international know-how from the fields of insurance, banking and asset management in ‘Allianz Climate Solutions’ and offer customers tailor-made solutions based on green products and services.”

A climate action plan has been drafted including 17 objectives and 80 measures for each of the business areas as well as for in-house ecology and communication. The action plan also assigned responsibilities and time frames for the implementation of the strategy. Several studies have followed. They include “Climate Change & Insurance: An Agenda for Action” in 2006, as well as a US-based report on climate

change and a Russian-based report on the carbon market business

Results To Date The Allianz climate road map has triggered several actions with an impressive record of deliverables. The company focused on renewable energy and the carbon market, involving all business units of the Allianz Group. Allianz also provides advice to policy-makers on climate change.

Results from the road map include:

- Allianz has become a leading insurer in Germany for renewable energy solutions;
- Allianz Global Investor's “Allianz-dit Global EcoTrends Fund”, which invests in renewable energy, collected more than €1 billion in less than a year in Europe, US and Asia;
- Allianz Capital Partners is investing a portion of life insurance premiums into wind farms across Europe (€500 million in next 5 years);
- Allianz's banking arm, Dresdner Bank, is the leading service provider for the rapidly growing European emissions trading market;
- Allianz Global Corporate and Specialty uses Google Earth to visualize regional risks and better calculate premiums;
- Customers increasingly demand “green” products that not only cover their risks but also reward their environmental behavior; therefore, Allianz has introduced green product schemes such as “Green Buildings” in the US and a green car insurance in Austria.
- Various Allianz units conduct research on renewable energy to evaluate risks and opportunities; Dresdner Kleinwort's Equity Research issued three research notes on the renewable energy sector at the beginning of 2007; Allianz Re has issued an analysis report on “Renewable Energy – Insurance Opportunities for RV6 Property/Engineering”.

Lessons Learned

- Climate change is not only a risk to the company but also involves market opportunities that can be used to foster the reduction of CO₂ emissions. Clients multiply such opportunities as new products and services raise their awareness and stimulate common action.
- Binding targets are particularly relevant for Allianz as an investor to create the necessary investment security.

Background BHP Billiton is the world's largest diversified resources company. The company's commitment to sustainable development means safety, health, environmental and community responsibilities are integral to the way it does business.

The company believes that the risk of climate change associated with increasing emissions of greenhouse gases must be addressed through accelerated action to stabilize greenhouse gas concentrations in the atmosphere. To achieve this in a manner consistent with meeting energy and natural resource needs, behavioral change, technological progress, and innovation are necessary. BHP Billiton has established an emissions reduction financial commitment to accelerate the speed, scope and commercial deployment of low emissions technologies while at the same time matching emissions reducing activities of its employees and communities.

BHP Billiton is committed to improving the management of energy and greenhouse gas emissions from its operations. The capture of methane from coal mine ventilation and its conversion to electricity at its West Cliff Colliery in Australia is an example of applying innovative technology to significantly reduce greenhouse gas emissions while cutting costs.

Reason For Action Coal mining releases methane gas from the coal and adjacent rock. Because methane can be explosive in air, this is a primary safety concern for mining operations. The removal of methane requires large ventilation systems to draw clean air into and through the mine. Methane is a greenhouse gas with a global warming potential more than 20 times that of carbon dioxide. Ventilation systems constitute the single largest source of greenhouse gas emissions from underground coal mine operations. Conventional methods of capturing and destroying methane are ineffective at the low concentrations (typically less than 1%) present in ventilation air; therefore a new technology was needed to address this source of emissions.

Process, Action Taken BHP Billiton, in partnership with MEGTEC Systems AB and the Australian Government, has developed, constructed and commissioned the world's first commercial ventilation air methane oxidation project, with a successful start-up in early 2007. The project is located at the West Cliff Colliery in Illawara and uses MEGTEC VOCSIDIZER(tm) technology.

This process consists of a thermal flow-reversal reactor that employs the principle of regenerative heat exchange between a gas (ventilation air) and a solid (bed of heat exchange medium selected to store and transfer heat efficiently) in the reaction zone. Ventilation air containing diluted methane flows through the reactor from one side. Methane oxidation takes place near the center of the bed when the mixture exceeds the auto ignition temperature

of methane, initially assisted by electric pre-heating elements. When the far side of the bed becomes sufficiently hot, the reactor automatically reverses the direction of flow. Close to the reactor's center, the methane reaches auto ignition temperature, oxidizes, and generates heat that is captured to produce steam.

Results To Date BHP Billiton's process has been operating successfully since January 2007. At current operating rates, the total methane captured and destroyed by the process is expected to be 260,000 tons of carbon dioxide equivalents per year. In addition to reducing carbon emissions, the process generates 6 MW of electricity from a steam turbine that provides energy for the coal mining operations.

Lessons Learned The project has demonstrated that high volumes of mine ventilation air with very low concentrations of methane can be effectively treated to reduce the associated greenhouse gas emissions and capture waste heat as an energy source. The US Environmental Protection Agency estimates the methane released from coal mining operations worldwide to be about 237 million tons of CO₂ equivalent. This technology therefore has the potential to make a significant contribution to mitigating the risks of climate change. BHP Billiton and MEGTEC are investigating additional mine ventilation air applications at locations worldwide.

BHP BILLITON

“At BHP Billiton we recognise the intrinsic link between sound sustainability performance and long-term business viability. Climate change is a key focus for us, and innovations like this can help provide sustainable solutions.”

Charles Goodyear
CEO of BHP Billiton

DEUTSCHE TELEKOM AG

"I feel myself committed regarding climate protection not only because I am personally convinced but also because of my responsibilities as the CEO of Deutsche Telekom AG. Our products and services can offer an important contribution to reduce CO₂ emissions. We will certainly take advantage of these opportunities."

Mr. René Obermann
Chief Executive Officer (CEO)
Deutsche Telekom AG

Background Deutsche Telekom, as an individual company, but also in a cooperation with ETNO and with organizations such as WWF, has extensively investigated the positive environmental impacts of replacing business travel by video-/audio-conferencing. While these investigations showed huge time, monetary and emission savings potential, the acceptance of e-conference technologies worldwide is still at a very low level.

Reasons include the relatively low transmission quality and the more important fact that the technology does not seem to fit the usage, behavior and flexibility needs of the target groups.

It is the company's intention to change this and make this technology more acceptable while also being mindful that Deutsche Telekom's mobile operations business unit "T-Mobile" was spending a nine-digit Euro figure on national and international travel three years ago by itself. This was expensive, time consuming and environmentally unfriendly.

Reason For Action In a world where unlimited communication and flexibility become increasingly important and where the use of traditional transportation has a growing negative impact on the environment, it is time to find sustainable alternatives. "Zero Emission Meetings" are the combination of the desktop video conferencing service and all compatible video conferencing and collaboration services in Deutsche Telekom's portfolio (independent if it is a mobile laptop or a desktop system). In the last three years more than 2,000 desktop video conferences have been held every month with more than 500 international conferences each month. This cuts travel budgets, travel time and CO₂ emissions to the environment.

Process, Action Taken T-Mobile - together with its provider T-Systems - has designed and rolled out the Desktop Video Conferencing Service (DTVC) to seven countries in Europe. Preparation for rollout in the whole of Deutsche Telekom is under investigation.

Results To Date Results to date include:

- Over 2,000 Zero Emission Meeting (DTVC) users up to March 2007;
- More than 2,100 Zero Emission Meetings per month with over 500 international conferences held.

Taking the above into consideration, more than 4,500 tons of CO₂ have been saved through this internal use of DTVC. The potential emissions savings through much broader use offers unimaginable new perspectives.

Lessons Learned Zero Emission Meetings are a tangible representation of savings beyond money. Deutsche Telekom has a whole portfolio of

solutions that not only enable businesses and staff to communicate efficiently and without limits, but at the same time take into account the new environmental awareness of society.

DTVCs connect the user with the conversational partner whenever and wherever the users want with the click of a button and without:

- Travel arrangements,
- Travel time,
- Travel expenses,
- Overnight stay, and best of all,
- A further negative impact on the environment, i.e., without CO₂ emissions.

Since Zero Emission Meetings via DTVC are more than convenient tools to save money and time, Zero Emission Meetings contribute consistently and measurably to environmental protection. Deutsche Telekom continues to advance and examine sustainable solutions such as these, with independent organizations and partner initiatives such as the Global e-Sustainability Initiative (www.gesi.org) of the ICT industry in cooperation with the United Nations Environment Programme.

ELECTRICITÉ DE FRANCE – HYDRO ENGINEERING CENTRE (EDF-CIH)

“ We know that the commitments to sustainable development we make as an industrial group are only valid if they meet society's expectations. The Nam Theun 2 dam project in Laos shows how strong we can be when companies, NGOs and local, national and international authorities work together to promote sustainable development in emerging countries.”

Pierre Gadonneix
Chairman and CEO of EDF

Background The NAM THEUN 2 project originated in a protocol signed between the Lao and Thai Governments. That agreement stipulates supply by Laos of 3,000 MW (extended to 5,000 MW in 2006) to the Energy Generating Authority of Thailand (EGAT) to meet that country's rapidly growing needs for electrical power.

The 1,070 MW Nam Theun 2 (NT2) hydro project in Laos has been developed by EDF under a BOOT (Build, Own, Operate, Transfer) process, in association with regional firms for more than 10 years. The construction works started in 2005. The Commercial Operating Date of the whole scheme is set for the middle of December 2009. The electricity will be provided both to EGAT (Thailand consumption) with 995 MW (5,635 GWh/year) and to Electricité Du Laos - EDL (for local consumption) with 75 MW (200 to 300 GWh/year).

The project will be transferred, free of charge, to the Government of Lao PDR at the end of the 25-year concession period. The NTPC (Nam Theun 2 Power Company Ltd) is composed of 4 shareholders: EDF International (35%), EGCO (25% – Electricity Generating Public Company – Thailand), LHSE (25% – Lao Holding State Enterprise – fully owned by the Government of Lao PDR) and ITD (15% – Italian – Thai Development Public Company – Thailand).

The NAM THEUN 2 hydroelectric scheme is a trans-basin project (partial water diversion from Nam Theun river to Xe Bang Fai River) with 1,070 MW installed capacity under 350 meter head. It creates a 450 km² and 3.5 billion m³ reservoir by means of a 45 meter high dam.

Reason For Action 89% of the world's renewable electricity production in 2002 came from hydropower. The development of a hydro project is sustainable if social and environmental issues are properly treated and is a powerful tool for fighting climate change and global warming. Hydropower is almost always CO₂-free and CH₄-free except in particular conditions such as a very shallow reservoir in a tropical zone. In this case, emissions of GHG from decaying biomass can lead to significant emissions during the first years after the reservoir impounding. However, overall “net” emissions will be far less than a combined cycle gas turbine plant.

As part of its commitment to a sustainable development approach, the EDF Group seeks to balance economic development with a high level of service, environmental protection and social equity at all their operations worldwide.

Laos, where 70% of its 5.6 million people live on less than US\$ 2 a day and have little or no access to basic services, says the dam is crucial to lifting its people out of poverty. The Lao government is expected to earn nearly US\$ 2 billion in revenues over a 25-year operating period (GDP increasing by 3.2%/year), most of it from power sales to neighbor-

ing Thailand. Thanks to hydro generation from NT2, 300 to 500 million tons of CO₂ emissions will be avoided over a 100 year-period, a protected area will also be built and financed by the project.

Process, Action Taken The NT2 project displays a unique approach towards environmental and social management. Studies of the potential environmental and social impacts of the project have been the subject of comprehensive assessment and evaluation by local and international experts and institutions under the supervision of the World Bank, the Government of the Lao PDR and the sponsors. A high level of public consultation and disclosure has been a priority to ensure that all affected people are fully informed about the Project and their views taken into consideration. Extensive socio-economic surveys have been performed regarding both the population living in the future reservoir area and those living downstream.

Results To Date Construction works started in May 2005 and are conducted under very strict social and environmental requirements. The current workforce on site amounts to 8,000 people. EDF is acting as Head Contractor and bears the responsibility of delivering the project on a turnkey basis to the project company NTPC by October 2009.

All obligations and measures needed to mitigate the Project's impacts or to compensate the population have been identified in the expert studies. They have been contractually sealed into the Concession Agreement signed between the developers and the government of Laos.

The approximately 1,100 households, or 7,000 people, who live within the area of the future reservoir will move in a maximum 5 km area from their original homes. New housing, schools, health and community infrastructure, complete with electricity and water supply, will be constructed.

Lessons Learned The project is on track and could be a future best practice example of how to implement sustainable large hydropower development, respecting the best international standards in term of environment and social commitments. It is also a very good example of public-private partnership with the World Bank Group and EDF Group as leaders. The President of EDF signed a memorandum of understanding with the government of Laos end of 2006 to study the opportunity of developing a second hydro project in this country.

ERICSSON

“Ericsson is committed to making positive contributions to the communities in which we work and the world in which we live. Our technology offers countless opportunities to create more sustainable societies, and we will continue to build upon these initiatives.”

Carl-Henric Svanberg
CEO and President
of Ericsson

Background The information and communication technology sector has a key role to play in addressing climate change. Although the telecom sector is relatively energy-lean, there are many opportunities to improve the energy efficiency of its products and services.

Ericsson is committed to corporate responsibility and making a positive environmental impact. It has defined aggressive targets to improve its products' energy efficiency – particularly the radio base stations (RBSs) that are Ericsson's largest volume product.

RBSs provide the necessary infrastructure for mobile phones to operate; however, they represent about 75% of Ericsson's indirect CO₂ emissions. Consequently, energy improvements within the RBS portfolio are a key focus area.

Reason For Action For more than a decade, Ericsson has used life-cycle analysis (LCA) – a scientific technique to analyze and improve the total environmental impact of a product or system throughout its lifetime. From ongoing studies, advanced data collection systems, and deep understanding of the environmental impacts of a mobile telecom network in operation, Ericsson knows that the usage phase of its products is the most significant from an environmental perspective, and this phase also provides the best opportunities for making energy-efficiency improvements. As products typically have a long lifespan, energy-efficient product design is also important.

Furthermore, energy-lean products provide a significant competitive advantage. Energy efficiency is increasingly important to customers. The company's product portfolio gives customers greater cost efficiencies via reduced energy consumption and subsequent lower network operating costs, while simultaneously reducing energy and carbon impacts. In turn, Ericsson's environmental initiatives provide a platform for stakeholder engagement (for example, with customers, investors, employees and suppliers) while contributing to long-term shareholder value.

Process, Action Taken Based on LCA, Ericsson has set energy-efficiency targets as part of its environmental management system and design for environment activities. Ericsson has focused on the usage phase of products and committed to improving the energy efficiency of its 3G radio base stations. The target is up to an 80% energy-efficiency improvement between 2001 and 2008. This can be broken down into incremental targets and results for the specified time period:

- Between 2001 and 2005, a 60% improvement in energy efficiency was achieved;
- From 2005 to 2008, an additional 50% improvement from the 2005 baseline is targeted with an incremental target of 25% set for 2006.

“Energy teams” measure progress quarterly and report on key performance indicators.

Ericsson is also examining other energy opportunities in its portfolio. It is designing smaller, less energy-intensive products and systems that run on solar or wind power, and it is pioneering projects to explore biofuels as a potential energy source for mobile telecommunications.

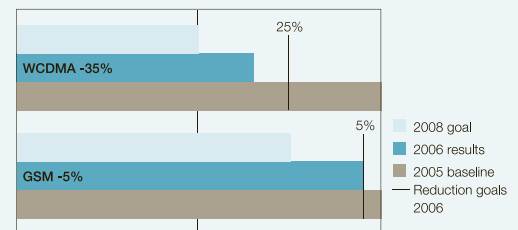
Results To Date Ericsson has created various products with lower energy consumption. Based on the above targets, RBS products from 2006 onward will help save about 2.2 million tons of CO₂ during their average 10-year lifespan. Additionally, during 2006, Ericsson exceeded its incremental 25% target by 10%, achieving a 35% improvement.

Ericsson RBS improvements also translate into reduced annual CO₂ emissions per 3G mobile phone subscriber. In 2006, CO₂ emissions per user were 29 kg, down from 38 kg in 2005 and 54 kg in 2002 (25 kg of CO₂ is equivalent to running a 5-watt light bulb for one year.).

From 2007, Ericsson GSM radio base stations will offer a “standby” function, reducing energy consumption between 10 and 20% during low traffic periods. This feature works with all Ericsson GSM RBSs introduced since 1995. If it were applied to all RBSs installed by Ericsson, it could save 1 million tons of CO₂ per year – emissions equivalent to about 330,000 cars driving 16,000 kilometers in one year.

AVERAGE RADIO BASE STATION ENERGY CONSUMPTION

During 2006, Ericsson mapped electricity consumption during use of all our main products. The largest volume products are radio base stations (RBS) representing approximately 75 percent of Ericsson's indirect CO₂ emissions.



Lessons Learned Ericsson's commitment to corporate sustainability and addressing climate change makes good business sense. It is a key concern for stakeholders, customers, shareholders and employees, and there are numerous opportunities for Ericsson to make a positive contribution to a low-carbon future.

Improved energy efficiency reduces energy consumption and CO₂ emissions, lowers customers' operating expenses, and provides Ericsson with a competitive advantage. As a result, Ericsson is extending its LCA approach across its entire product portfolio. For more information, please visit http://www.ericsson.com/corporate_responsibility/index.shtml

Background In January 2006, Novo Nordisk signed an agreement with WWF to join its Climate Savers program. This program invites leading global businesses to demonstrate that investing in reduction options can benefit the long-term health of the business. Under this agreement Novo Nordisk has set an ambitious target for the company's CO₂ reductions: to achieve a reduction of 10% of its CO₂ emissions by 2014 compared to 2004. To do so, projected significant growth in production needs to be decoupled from the levels of energy needed in the processes.

This action was motivated by two key drivers: first, Novo Nordisk is committed to doing business in a financially, environmentally and socially responsible way – framed as the Triple Bottom Line business principle – and recognizes the urgent need to address climate change, the greatest challenge of our time to sustainable development. Second, Novo Nordisk's production is energy intensive. It is critical to reduce the company's dependency on the availability and cost of fossil fuels.

Novo Nordisk has built its climate strategy on three pillars: increasing productivity and thereby lowering energy consumption per produced unit, identifying and implementing energy savings and converting to renewable energy supplies.

Reason For Action Executive management and the Board of Directors back the strategy. The rationale, according to Per Valstorp, Senior Vice President of Product Supply and Lise Kingo, Executive Vice President and Chief of Staff, who co-authored the strategy, is as follows. Being prepared for a carbon-constrained world is an act of due diligence. An early response to the climate change challenge is an act of leadership. Combining the two is sound business.

Process, Action Taken Initial follow up action was to identify energy savings potential at the company's production sites in Brazil, China, France, Japan, Denmark and the US. Energy screenings found many easy wins and projects with short payback times. A fund was established for sites to conduct feasibility studies, and an internal price for carbon was introduced to promote their implementation.

An ongoing, comprehensive process of implementing LEAN management principles – named cLEAN® at Novo Nordisk – will be instrumental in achieving the bulk of reductions. A communication strategy was framed to support initiatives to optimize energy consumption and underpin the need to act now. Backing it is a comprehensive communication toolkit consisting of a video, leaflet and materials for line managers.

Results To Date Employees in Denmark – which hosts about half of the company's global workforce – were invited to a special showing of former US Vice President Al Gore's documentary, *An Inconvenient Truth*. Part of the event was an

exhibition explaining the factors that drive climate change, what Novo Nordisk is doing, and what individuals can do at work and at home to reduce CO₂ emissions. Similar events are held locally at other geographic sites, inviting debate, reflection and action.

A highlight was a visit to Novo Nordisk's headquarters by Mr. Gore in the spring of 2007. During his visit he met with some 300 employees and senior managers of Novo Nordisk to learn of the company's work to address the climate change challenge and to share ideas on how to put a halt to global warming.

Tackling the third big challenge – greening energy supplies – required the involvement of external partners. Here, a solution was found in the form of a ground-breaking partnership agreement with Novo Nordisk's Danish energy supplier, DONG Energy. Some 90% of the company's CO₂ emissions occur in Denmark, partly because this is where the majority of the production is, partly because energy supplies in Denmark are currently largely carbon-based.

DONG Energy is assisting Novo Nordisk in identifying and realizing energy-savings, and in turn Novo Nordisk devotes its savings on the annual energy bill to buying green energy from new wind farms. This solution is cost-neutral to Novo Nordisk, but encourages DONG Energy's investments in expanding its capacity to deliver more renewable energy. And the ambition is that power supplies for all of Novo Nordisk's activities in Denmark will be based on 100% renewable energy by 2014.

Lessons Learned Being a member of the Climate Savers program has given Novo Nordisk additional incentive to mobilize its climate action. Innovative ways have been found in involving all employees. Furthermore, the partnership with DONG Energy is expected to serve as an engine for driving Danish businesses' demand for renewable energy.

NOVO NORDISK

“We are confident that DONG Energy can help us achieve significant energy savings. At the same time, through this partnership agreement, we contribute to generating a financially sustainable basis for wind turbine energy in Denmark.”

Lise Kingo
Executive Vice President
of Novo Nordisk

PETROBRAS

PETRÓLEO
BRASILEIRO S/A

“Achieving international social and environmental responsibility excellence standards, including contributing to the mitigation of global climate change, currently represents to Petrobras more than a commitment; it is a business requirement that we foresee in all stages of our activities.”

José Sergio Gabrielli de Azevedo,
CEO of Petrobras

Background One of the greatest challenges this century is to find ways to fulfill the growing demand for energy while not affecting the stability of the world climate. The availability of and access to energy are important to all countries and essential for the economic growth and social welfare of developing countries. The search for sustainable and equitable solutions must guide energy companies over coming decades.

Reason For Action Aware of this reality, Petrobras, as a company committed to incorporating social and environmental responsibility principles in its activities, as well as focusing on health, safety and environment excellence as one of its strategic projects, has defined objectives, strategies and goals for allowing the incorporation of global climate change issues into its business and management planning.

As a contribution to the climate debate, Petrobras presents a set of initiatives that illustrates its corporate commitment to control GHG emissions associated with its processes and products.

Process, Action Taken

Energy efficiency The optimal gas use program (POAG) is a volunteer gas flaring reduction program with investments of approximately US\$ 200 million. It involves improvements in associated gas use at 24 platforms such as installation and repair of compressors, new gas pipelines and processing plant optimization.

It also involves turbo-expanders to generate electric energy by the use of combustion gases exhausted in fluid catalytic cracking (FCC) in four refineries, with an investment of US\$ 197.8 million.

Renewable energy Petrobras is involved in biodiesel production with a social fuel label for the use of family farming inputs, aiming at the development of a biofuels market. Since the 1970s Petrobras has worked in several stages of the alcohol industry chain through the national alcohol program ProAlcool. The Macau pilot wind power plant was the first Petrobras project registered in the CDM process.

Research and development As a technology-based organization, Petrobras supports its strategic goals on sound R&D programs with more than 220 projects of about US\$ 135 million, including carbon capture and storage (CCS), natural gas, energy efficiency, hydrogen and renewable energy.

The company has developed “HBIO”, a proprietary technology that allows the blend processing of mineral and vegetable oils, which will provide a more sustainable diesel oil for the Brazilian market. It also has around 20 R&D projects on CO₂ separation & capture, CO₂ storage, industrial residue carbonation and carbon fixation into biomass, using natural processes.

Emissions quantification and control SIGEA, the air emissions management system, enables inventorying and detailing of all the company's air emissions (greenhouse gases and regulated pollutants).

Reforestation The Rio de Janeiro Petrochemical Complex is the largest Petrobras-only project and includes the reforestation of an ecological corridor with 3.6 million trees in five years, as well as the recovery of agricultural and mining-impacted areas.

Results To Date

Energy efficiency With 91 actions concluded, the gas flaring reduction program achieved a 3.5 million cubic meters per day reduction of gas flaring, that meant 22% improvement in associated gas use from 1999 to 2006. Significant improvement in the company's energy intensity index (EII) will result in total electric energy generation of 68.5 MW and a reduction of energy used.

Renewable energy Petrobras has three biodiesel industrial units in low-income rural areas in Brazil's semi-arid region to process technological routes developed – oil plants and oil seeds with capacity of 171,000 cubic meters per year up to December 2007. More than 4,200 Petrobras gas stations were distributing blended diesel/biodiesel (B2) before mandatory use. Via the ProAlcool program, Petrobras helped Brazil save around US\$ 52 billion in exchange value as well as avoiding the emission of about 650 million tons of CO₂. The wind power plant has already produced 15,038 MWh since start up in December 2003.

Research & Development

From 2006 to 2008, US\$ 15 million will be invested in 30 carbon sequestration and climate change R&D projects through the “Climate Change Mitigation Technologies Network” involving 10 Brazilian universities and R&D institutions.

Emissions quantification and control

Petrobras has integrated all its activities, generating an inventory of more than 20,000 emissions sources, allowing real time management.

Lessons Learned There are many opportunities for improvement, which in addition to avoiding environmental damages may result in economic benefits. The development of customized technologies is very important to the environmental and social features of the country and can help it realize those opportunities.

UNILEVER

Background Unilever has a long-standing policy of reducing greenhouse gas emissions. Using its environmental management program and annual target setting, Unilever has reduced CO₂ emissions in its operations by over 30% in 10 years. In 2006, the company convened a Greenhouse Gases Working Group to develop a formal strategy on climate change that not only addresses direct carbon emissions, but also indirect ones from the sourcing of raw agricultural materials through to consumer use.

Unilever has been recognized for some of its actions in this area. In 2006, the company ranked first in the food and retail sector in the Carbon Disclosure Project's Climate Leadership Index for best practice in greenhouse gas emissions and climate change strategies.

Unilever is also working in partnership with others to influence behavior and reduce impacts. The company's involvement in the Refrigerants, Naturally! initiative with the United Nations Environment Programme and others is one example of how voluntary multi-stakeholder approaches can contribute to an effective climate policy. Ice cream distribution and storage requires sub-zero temperatures and the use of refrigerants at all stages. Ice cream freezers used for storage and display at the point of sale maintain the products at -18°C. Hydrofluorocarbons (HFCs) are still the most common refrigerants used in these freezers. HFCs released into the atmosphere have a significant global warming potential (GWP). Unilever owns nearly 2 million of these freezers worldwide.

Reason For Action As a sponsor in the Sydney Olympics, Unilever was challenged to help make these the Green Olympics. Unilever took this challenge and developed ice cream freezers with "natural" hydrocarbon refrigerants that have significantly less impact on global warming. Hydrocarbon freezers also use about 9% less energy, reducing their climate impact even further.

Process, Action Taken Unilever issued a global statement committing itself to implement, by 2005, a non-HFC purchasing policy for ice cream freezers. Successful implementation of this policy meant a close working relationship with suppliers, giving assistance where appropriate. Unilever developed training materials to facilitate the acceptance and safe handling of the hydrocarbon freezers. Unilever also forged close links with a small group of other companies committed to HFC-free refrigeration (McDonald's and Coca-Cola), and with Greenpeace and the United Nations Environment Programme. This group subsequently formed the Refrigerants, Naturally! initiative and organized a showcase event in Brussels in 2004. At this event, Unilever shared background information and working examples of HFC-free point of sale equipment to peer groups and other stakeholders.

Results To Date Unilever has been purchasing hydrocarbon-refrigerated freezers since 2004. By the end of 2006 Unilever had 100,000+ hydrocarbon cabinets in the market globally. By the end of 2007 Unilever expects to have close to 200,000. Unilever has already replaced 32 tons of HFCs with hydrocarbons with a potential for a further 300 tons over the coming years. The initiative has grown in size, with IKEA, Carlsberg and PepsiCo joining at the end of 2006. As more members join, HFC-free refrigeration will become more widely accepted and move into the mainstream. The initiative is actively seeking new members to make the same commitments. Unilever contributes through personal contacts, promotions and presence at key events.

Lessons Learned This voluntary partnership approach with key stakeholders has proved to be effective in decreasing the climate impact of point of sale refrigeration equipment. The partners' willingness to share information and exchange ideas has facilitated the introduction of more environmentally friendly technologies. By taking the lead in demonstrating the feasibility of these technologies, the initiative has reduced some of the barriers to implementation allowing others to follow more easily. A group of companies speaking with one voice also has a greater impact and influence on suppliers, potentially changing R&D priorities to meet the new requirements. The Refrigerants, Naturally! conference in Brussels was pivotal in changing attitudes among peer groups and among suppliers.

In the case of Unilever's introduction of hydrocarbon cabinets, safety concerns were a potential barrier. A deep understanding of the issues, close working relationships with suppliers and the development of training material for internal and external use all contributed to overcoming this barrier. Top management commitment and also commitment on the part of the people doing the actual work are key. Internal and external awareness raising of the initiative has generated goodwill and a willingness to support the work needed to make it happen. Good contacts and communication lines and agreements between partners are important. This helps enormously in managing the expectations of external parties. Greenpeace and UNEP participation were and are crucial in granting credibility to the initiative.

Unilever calls on governments and others to support these types of voluntary partnerships as useful complementary approaches to reducing climate change impacts and encouraging others to explore opportunities. Unilever is open to share its experience. For more on Refrigerants, Naturally! and other activities to reduce direct and indirect impacts, see Unilever's Sustainable Development Report at www.unilever.com.

VEOLIA ENVIRONNEMENT

“From a Group perspective, Veolia Environnement participates actively in the development of the carbon market either through project mechanisms and their resulting emission credits or through its operations included in the European Union emission trading scheme.”

Henri PROGLIO
Chairman and CEO of
Veolia Environnement

Background In September 2000, a public-private partnership (PPP) agreement was signed between the governor of Alexandria and Veolia Environnement to ensure, for a 15-year period, the operation of the waste management system of Alexandria. This is the second biggest city in Egypt with more than 5 million inhabitants. It is the first PPP of this kind to be concluded in the waste management sector in Egypt. Launched in 2001, it has been run jointly and successfully over the past six years by the authorities of Alexandria and Veolia Environnement.

The Alexandria project includes a “Clean Development Mechanism” (CDM) project registered by the UNFCCC under the Kyoto Protocol. It involves landfill gas recovery at two landfills and should enable a GHG-emission reduction of approximately 3.7 million tons of CO₂ equivalent over a 10-year period (2005–2015).

Reason For Action The objective is to provide integrated management for the one million tons of waste generated every year in the whole area of Alexandria, from collection and cleaning to treatment, final recycling and agronomic amendment, the rehabilitation of two old dump sites, and the collection and treatment of medical waste.

The local authorities have defined five key objectives :

1. Assess and identify waste deposits and organize collection channels;
2. Train the workforce through technical, theoretical and practical training;
3. Install, maintain and renew necessary technical equipment;
4. Encourage the population to respect the environment and use the containers;
5. Sort, treat and recycle waste with strict quality and safety criteria.

Today, 4,500 employees ensure the cleaning of the city, the collection and the treatment of 2,500 tons of waste every day (3,100 tons during summer). All of the waste is treated.

Process, Action Taken The project has been progressively implemented in Alexandria and involves:

- Collecting household waste (through thousands of new containers and 135 adapted collection trucks);
- Mechanical street washing (with 4 water tank trucks);
- Manual & mechanical sweeping of streets (with adapted tricycles), cleaning of squares, fountains, gardens and pedestrian tunnels;
- Beach cleaning (with 8 motorized beach cleaners);
- Transportation to intermediate waste collection stations;
- Manage composting facilities;

- Manage new sanitary landfills and rehabilitate old dumps;
- Implement active landfill gas recovery to reduce greenhouse gas emissions.

For its operation in Alexandria, Veolia has obtained ISO 9001 (Quality), 14001 (Environment) and 18001 (Health and Safety) certifications.

Results To Date The cleanliness of the city and its environment brings more investors and tourism with a real impact on the local economy. It also creates a safer environment and reduces illness and medical expenses.

Some 150,000 tons of compost are produced and sold every year to local farmers, contributing to the development of agricultural activities in the region. More composting lines have been inaugurated in order to answer farmers and market demands.

The environmental benefit of this project, the first of its kind in the region, goes beyond collecting rubbish and maintaining public spaces (streets, beaches, monuments, green spaces). The benefit also includes the establishment of a modern treatment infrastructure adapted to the local context (containers installed in streets, new transfer and composting facilities, sanitary landfills built in accordance with international standards), accompanied by the rehabilitation of an old dump site.

The international community has acknowledged the improvements in the quality of environmental services in Alexandria. For this joint initiative, Veolia Environnement and the Alexandria authorities have received the United Nations' “2006 Habitat Roll of Honour” award for their work managing the city's waste collection and treatment.

Lessons Learned Motivated by a keen awareness of the importance of climate change, this project has allowed Veolia Environnement to gain solid expertise in the development and certification of CDM GHG reduction projects. Veolia Environment can now implement similar projects more broadly to meet the unprecedented challenge of global climate change.

More generally, as an environmental specialist Veolia Environnement can and must play an active role in combating GHGs. In each of its businesses, it seeks on behalf of its local authority and industrial clients to reduce the impact of pollution, including air pollution, in particular by reducing energy consumption, ensuring compliance with regulations, and containing or capturing harmful gases. This can be done in the production of heat, the management of waste-to-energy plants and landfills, the transportation of people and freight, and water and wastewater sludge treatment.

Background

Cement is a key ingredient of economic development, and the use of it is growing rapidly, especially to meet the needs of developing countries such as China and India. However, the manufacture of cement involves a wide range of sustainability issues that need to be addressed, including climate change. In 1999, leading cement companies voluntarily embarked on what became the Cement Sustainability Initiative (CSI), a member-led program of the WBCSD. The purpose was to find new ways for the industry to reduce its ecological footprint.

Reason For Action

The IEA forecasts that global cement production will more than double by 2050, with the majority of this growth occurring in developing countries. Thus the cement sector, already producing about 5% of anthropogenic CO₂ emissions, faces a challenging battle between two forces: customer demand for an essential product and climate-induced constraints on manufacturing. Climate protection, and in particular management of CO₂ emissions, is considered one of the priority issues to be addressed by the CSI.

Process, Action Taken

Protocol for measurement One of the most significant pledges made by the CSI in its *Agenda for Action* (2002) was to develop a protocol for measuring and reporting CO₂ emissions from cement manufacturing. The CSI worked with the WBCSD and the WRI, among others, to investigate public policy and market mechanisms for measuring and making meaningful reductions in CO₂ emissions.

Each company agreed to use the protocol, develop a climate change mitigation strategy, and by 2006 to publish targets and an annual update on progress. The protocol was updated in 2005 to incorporate accounting practices that allow for emission credits and trading.

Shared Database of CO₂ Emissions

In 2007, CSI member companies agreed to provide independent third-party assurance of their CO₂ emissions, even though many companies do not operate in policy regimes that require this. The CSI has embarked on an ambitious data collection program to build an international database of CO₂ emissions tracking plant-by-plant emissions. The analysis of these data will play a critical role in understanding the various policy options a sector approach (see below) may offer. An independent third-party service provider will operate the database and develop reports upon the request of a CSI-based steering committee. Appropriate anti-trust and confidentiality issues are well addressed. The data will be collected from all installations of CSI members and participating companies for the years 1990, 2000 and 2005.

CSI sectoral approach The CSI is now leading an evaluation of a different policy approach to GHG emissions control by developing a "sector-based" approach for the industry: proposed management of emissions within industrial sectors, rather than within normal geopolitical boundaries. Under this approach, an emission target would be set by policy-makers for a global sector (or portion of one), and entities within the sector given the opportunity to develop practical approaches to meet the target. This approach has the appeal of a new (and still untested) policy tool to help governments and industry move more quickly, economically and equitably toward mitigating climate change.

Results To Date

- Companies produce consistent performance data using the CSI CO₂ protocol for monitoring and reporting CO₂ emissions (developed by the WBCSD and the World Resources Institute).
- Individual companies have set their own targets for reducing specific CO₂ emissions (per ton of product) and are required to report publicly on their progress in meeting their target.
- In consultation with stakeholders, the CSI developed a set of guidelines for the responsible use of fuels and raw materials in the cement industry.
- Additional guidelines were developed for safety, environmental and social impact assessment, and emissions management. All are publicly available at www.wbcSDcement.org.
- Work has begun looking at the end-of-life recycling of concrete.

Lessons Learned The main lessons learned from the initiative are the following:

- Bring together leading players in the industry;
- Agree common commitments and set clear key performance indicators;
- Develop independent measurement and assurance;
- Continue to explore new ways to tackle sustainable development issues in a sector-based approach.

WBCSD CEMENT SUSTAINABILITY INITIATIVE

"The CSI represents a serious effort by an important industry sector to tackle complex sustainability issues in a practical, results-oriented way. Using a common set of key performance indicators and requiring public reporting of individual company achievements is a major step forward in providing an important level of accountability for a voluntary program."

Dr Mostafa Tolba
President of the International Centre for Environment and Development (ICED) and former Executive Director of the United Nations Environment Programme (UNEP)

WORLD BANK GROUP: INTERNATIONAL FINANCE CORPORATION

Background There is a growing need for clean, reliable power for productive stationary power applications in many developing countries where a lack of reliable power is a key hurdle to economic development. Fuel cell technologies, while still wrestling with some technical challenges, promise clean, modular, high-quality power in a range of sizes and applications.

With Global Environment Facility (GEF) funding, the International Finance Corporation (IFC) began the "Fuel Cell Financing Initiative for Distributed Generation Applications" (FCFI) in late 2005. The initiative is structured in two stages, with the first stage facilitating quasi-commercial demonstrations, and the second stage targeting market penetration. Stage 1 plans to use up to US\$ 9.8 million for three demonstrations, while Stage 2 will provide up to US\$ 45 million for the promotion of stationary fuel cell applications in eligible developing countries.¹

Reason For Action The fuel cell industry, which has focused in the past on the transport sector, has now begun to look seriously at stationary power, which has greater applicability for the developing world. The objective for intervention in the industry at this stage is to foster the development of fuel cell products that are suitable for developing world applications, and to provide companies with the knowledge of developing world markets. By providing early support to such companies, it is felt that it may be possible to help developing economies leap frog to newer and more efficient distributed generation options in a manner that is beneficial to the environment and also helps spur economic growth. One example for this would be the use of fuel cells in data-centers in developing countries that are increasingly providing back-office services for large global companies.

Process The objective of the first stage is to gain transactional experience with stationary fuel cell technologies in developing countries. Up to three commercial demonstration projects are planned in this stage, with a maximum subsidy of US\$ 3 million per project. The subsidy will not exceed US\$ 2,000/kW installed and 50% of the fuel cell portion of the capital costs. The second stage will build upon the lessons learned from the first stage and will be initiated only when technology prices have dropped to more acceptable levels. The subsidy levels in the second stage will be lower to reflect the near commercial costs of the technologies. Greater emphasis will be placed on market penetration and sustainable growth during the latter stage.

Stage 1 is currently underway, with over a dozen proposals from different companies and technologies having been reviewed and vetted. This was the result of global requests for proposals (RFPs), which were duly analyzed by a team of experts. Applications ranged from 5 kW fuel cells for telecom tower installations in Africa, to much larger megawatt-size installations that consume hydrogen produced as a by-product of industrial processes. The companies who applied ranged from publicly listed global players to start-ups with venture capital support. There were also interesting partnerships in play, between local and global players. Due diligence had to focus carefully on the product, its future penetration capabilities, as well as the balance of technical and commercial challenges that remained at the time of award.

Based on these complex considerations, one project has been awarded a US\$ 3 million grant, while the search continues for two others.

Results To Date The winning project is for the use of 5 kW fuel cells for a telecom tower and other applications in South Africa. The proposal was jointly submitted by IST, an importer and distributor of fuel cells in South Africa, and Plug Power, a publicly traded company with US\$ 277 million in market capitalization in May 2007. The agreement with IFC includes support for 400 fuel cells to be installed in South Africa for back-up and baseload applications. There are also plans for expanding to other parts of Africa where grid power is less reliable than South Africa.

As of 24 April 2007, 155 kW of capacity had been installed using the IFC-GEF incentive, and just over 16% of the costs had been allocated to the initiative. However, since the bulk of the systems currently installed is for back-up applications, avoided carbon dioxide emissions are estimated at only 6,576 lbs, or 2,983 kg. It is hoped that as the next generation of baseload applications is installed, the greenhouse gas alleviation effect will be greater. In April 2006, Interros, a major Russian investment firm, and Norilsk Nickel, the world's largest producer of nickel and palladium, agreed to put US\$ 217 million in cash into Plug Power, in return for some 35% ownership in the company.

Lessons Learned The due diligence exercise in selecting the appropriate proposal for award and the experience with the IST-Plug Power grant have resulted in a rich set of lessons learned. These include:

1. Technical challenges in the area of fuel cells persist, and setting the technical acceptability parameters for different applications is an involved and time-consuming process.
2. When judging the appropriateness of a new technology such as fuel cells, there is no substitute for actual field trials. While laboratory simulations may partly compensate, a minimum level of field-testing in a developing country is necessary before approving a grant or proposal in a developing country.
3. The promise of market penetration rests squarely on the identification of the appropriate product and the appropriate risk sharing between different stakeholders, and IFC can play a key role in being the “honest broker” in such an exercise.
4. The value of such initiatives lies not in the monetary reward, but rather in the establishment of long-term relationships with the company. If one is patient, such relationships will lead to more commercial transactions in the future.

¹ The first stage has been approved by the GEF CEO, while the second stage has Council approval. Funding for the second stage will need additional approval at the GEF CEO level, once the first stage has met some milestones.



CARING FOR CLIMATE:
THE BUSINESS LEADERSHIP
PLATFORM

“CARING FOR CLIMATE: THE BUSINESS LEADERSHIP PLATFORM”

A Statement by the
Business Leaders of the UN Global Compact

Upon the occasion of the 2007 Global Compact Leaders Summit (Geneva), we, the business leaders of the UN Global Compact:

Recognize that

1. Climate Change is an issue requiring urgent and extensive action on the part of governments, business and citizens if the risk of serious damage to global prosperity and security is to be avoided.
2. Climate change poses both risks and opportunities to all parts of the business sector, everywhere. It is in the interest of the business community, as well as responsible behavior, for companies and their associations to play a full part in increasing energy efficiency and reducing carbon emissions to the atmosphere and, where possible, assisting society to respond to those changes in the climate to which we are already committed.

Commit to

1. Taking practical actions now to increase the efficiency of energy usage and to reduce the carbon burden of our products, services and processes, to set voluntary targets for doing so, and to report publicly on the achievement of those targets annually in our Communication on Progress.
2. Building significant capacity within our organizations to understand fully the implications of climate change for our business and to develop a coherent business strategy for minimizing risks and identifying opportunities.
3. Engaging fully and positively with our own national governments, inter-governmental organizations and civil society organizations to develop policies and measures that will provide an enabling framework for the business sector to contribute effectively to building a low carbon economy.
4. Working collaboratively with other enterprises nationally and by sector, and along our value chains, by setting standards and taking joint initiatives aimed at reducing climate risks, assisting with adaptation to climate change and enhancing climate-related opportunities.
5. Becoming an active business champion for rapid and extensive response to climate change with our peers, employees, customers, investors and the broader public.

Expect from governments

1. The urgent creation, in close consultation with the business community and civil society, of comprehensive, long-term and effective legislative and fiscal frameworks designed to make markets work for the climate, in particular policies and mechanisms intended to create a stable price for carbon;
2. Recognition that building effective public-private partnerships to respond to the climate challenge will require major public investments to catalyze and support business and civil society led initiatives, especially in relation to research, development and deployment of low carbon energy technologies and practices.
3. Vigorous international cooperation aimed at providing a robust global policy framework within which private investments in building a low carbon economy can be made, as well as providing financial and other support to assist those countries that require help to realize their own climate mitigation and adaptation targets whilst achieving poverty alleviation, energy security and natural resource management.

And will

1. Work collaboratively on joint initiatives between public and private sectors and through them achieve a comprehensive understanding of how both public and private sectors can best play a pro-active and leading role in meeting the climate challenge in an effective way.
2. Invite the UN Global Compact to promote the public disclosure of actions taken by the signatories to this Statement and, in cooperation with UNEP and the WBCSD, communicate on this on a regular basis, starting July 2008.

EXPLANATORY NOTE: “CARING FOR CLIMATE: THE BUSINESS LEADERSHIP PLATFORM”

A Statement by the
Business Leaders of the UN Global Compact

Origins of the Statement

The Global Compact's commitment to environmental protection is firmly embedded in its foundational spirit and three environmental principles. There is now a consensus that the climate change agenda will affect business and society in fundamental and transformative ways. The importance of early action is increasingly recognized. As climate change has become a fundamental issue for society, the need for leadership and voluntary action is becoming ever more urgent. Against this background, a consultation group comprised of business and civil society representatives convened by the Global Compact, UNEP and the WBCSD has prepared a Statement entitled “Caring for Climate, The Business Leadership Platform”. This Statement has also found broad support among the Global Compact's multistakeholder Board.

Endorsing the Statement

The Statement offers Global Compact business participants an opportunity to demonstrate climate leadership on both the individual and collective levels. A company's decision to endorse the Statement should follow the Global Compact's established leadership and organizational change model: it requires CEO-level support, strategic and operational changes within the organization, and ongoing public communication on related activities and performance in line with the “Communication on Progress” framework. Support for the Statement is, therefore, consistent with existing Global Compact engagement methodologies.

The Global Compact is aware that many of its 3000-plus business participants currently do not have the capacity to measure their GHG emissions due to size and other organizational characteristics. It is established practice at the Global Compact not to discriminate on these grounds. We will continue this tradition with regard to the Business Leadership Statement on Climate.

What the Statement is NOT

The Statement is NOT a new requirement for Global Compact participation. It is an optional platform for active Global Compact participants who wish to advance climate change solutions. A decision to abstain from the Statement will not in any way be viewed as an indication of a company's commitment to the Global Compact or impact its standing in the initiative. This Statement seeks to provide a practical platform for advancing the Global Compact's environmental principles. At the same time, other measures taken by companies to preserve the environment and to address their carbon footprint will continue to be equally appreciated under the UN Global Compact.

The Leaders Summit and Beyond

All Global Compact business participants are invited to express their support for the Statement. It is hoped that a significant number of business leaders will support the Statement before the Global Compact Leaders Summit (5-6 July 2007 in Geneva). The names of those companies will be listed on the Global Compact website at www.unglobalcompact.org and will be recognized at the event. During the Summit, it is expected that the United Nations Secretary-General and others will emphasize the importance of the climate change and this Business Leadership Statement. The Statement will remain open for signature during and after the Summit.

For more information

The Global Compact

<http://www.unglobalcompact.org>

Global Compact Leaders Summit

<http://www.globalcompactsummit.org>

Greenhouse Gas Protocol Initiative

<http://www.ghgprotocol.org/templates/GHG5/layout.asp?MenuID=849>

UNEP Division of Technology, Industry and Economics

<http://www.unep.fr/en/>

UNEP Energy, Consumption & Production Branches

<http://www.unep.fr/en/branches/index.htm>

UNEP Risø Centre on Energy, Climate and Sustainable Development (URC)

<http://uneprisoe.org/>

WBCSD Energy & Climate Focus Area

<http://www.wbcsd.org/web/energy.htm>

THE TEN PRINCIPLES OF THE GLOBAL COMPACT

The Global Compact's ten principles are derived from:
The Universal Declaration of Human Rights;
The International Labour Organization's Declaration on
Fundamental Principles and Rights at Work;
The Rio Declaration on Environment and Development; and
The United Nations Convention Against Corruption.

The Global Compact asks companies to embrace, support and enact, within their sphere of influence, a set of core principles in the areas of human rights, labour standards, the environment, and anti-corruption:

Human Rights

- 1 Businesses should support and respect the protection of internationally proclaimed human rights, and
- 2 make sure that they are not complicit in human rights abuses.

Labour

- 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining,
- 4 the elimination of all forms of forced and compulsory labour,
- 5 the effective abolition of child labour, and
- 6 the elimination of discrimination in respect of employment and occupation.

Environment

- 7 Businesses should support a precautionary approach to environmental challenges,
- 8 undertake initiatives to promote greater environmental responsibility, and
- 9 encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

- 10 Businesses should work against corruption in all its forms, including extortion and bribery.

