

Toward a low carbon economy

Presentation of the SBF120 *Carbon Disclosure Project France* questionnaire results

For the third year in a row, AXA is a special partner in the Carbon Disclosure Project (CDP) France. Although the AXA Group is not part of the carbon intensive sector, as an insurer and investor, it has chosen to show its commitment to the fight against climate change by co-producing the CDP's SBF 120 report and by taking part in the Caring for Climate initiative. These were the Group's main awareness-building actions in 2008. The AXA Group is also working to develop a product offer adapted to today's social and environmental issues. "AXA seeks both to guide its customers toward more responsible consumer choices, and to help companies reduce their environmental risk," explains Claude Brunet, member of AXA's management board. In so doing, the AXA Group aims to meet its customers' and employees' increasingly high expectations with regard to combating climate change.



Claude Brunet, Member of AXA's Management Board

On October 1, 2008, the Carbon Disclosure Project France's SBF120 questionnaire results were presented at AXA Group headquarters. The CDP survey, completed by France's 120 largest corporations listed on the stock market, rates corporate responsiveness to the challenges, risks and opportunities associated with climate change. By providing investors an analysis of climate change management within companies on the SBF120 and Global 500 indices, CDP forges a link between "financial systems and our ecosystem." (James Cameron, CDP Chairman). Claude Brunet proudly states, "In the current context of financial downturn, we continue to address the problem of climate change - a problem requiring both immediate and long-term solutions."

The presentation of CDP results offered the various stakeholders an opportunity to dialogue about the "challenges of the transition toward a low carbon economy." Talks focused on the financial stakes and how to guide consumers toward making responsible choices in terms of energy use.

Identifying the new risks and opportunities of climate change

Financial crisis & climate crisis

For companies, addressing the challenges associated with climate change ties in with their analysis of the associated risks and opportunities: risks to be identified and controlled, and opportunities to be seized.

At a time when "risk management" is being applied to climate change, the parallel between today's financial crisis and the "climate crisis" is worth studying. Amid the current financial turmoil, James Cameron underscores that the lessons to be learned are perfectly applicable to climate risk management. Indeed, both areas employ similar terminology. We speak about *systemic risk*, *identification and analysis of hidden risks*, *regulation* and *responsible practices*. The parallel ends, however, as soon as we consider the scope of these crises. "The systemic risk associated with a crisis of confidence in the banking system can be much more easily mitigated than the risk weighing on our biosphere," explains James Cameron. Unlike the banking system, the damage we are currently inflicting on our biosphere is irreversible.



James Cameron, Chairman of CDP

According to CDP France results, in 2008, 97% of companies identify at least one type of risk factor related to climate change. At the same time, 95% identify at least one opportunity, a significant jump compared with the 65% reported in 2006. The perceived impact of climate change, as either a risk or an opportunity, varies depending on the business sector and the level of GHG emissions.

Risk control and regulatory pressure

Among the risks and opportunities most frequently cited, those associated with regulatory changes rank highest. The French context provides an interesting example: 89% of French companies

surveyed identify a risk associated with climate change, compared with 75% for Global 500 CDP responses. This heightened awareness of regulatory risk factors is a result not only of the *Grenelle de l'Environnement* (French round table on the environment) but also of modifications to the emission quotas allocated in Europe, and of the approaching 2012 Kyoto protocol deadline. The current context has fueled a certain wait-and-see attitude with regard to regulatory changes, which reduces companies' visibility as well as their ability to effectively manage risk.

Regulatory risks are a major concern for companies in carbon-intensive sectors. Manoelle Lepoutre, Head of Exploration & Production R&D for TOTAL, a group specializing in oil and gas, explains, "We are currently investing in the development of technologies to capture and store CO₂." TOTAL is therefore readying itself not only for future regulatory changes, but also for the challenges inherent to extracting and producing fossil energy, an activity which is predicted to grow increasingly difficult and energy intensive.

Risk control and supply chain

While regulatory risks, risks associated with the increasing cost of energy and physical risks are the first to be cited, the importance of supply chain risks should also be underscored. "These risks are classified as hidden risks - risks that companies do not see, simply because they don't bother to look," explains Nigel Topping, CDP Supply Chain Project Manager, who nicknames these risks "the blind spots of climate change". These "blind spots" can be found in suppliers' businesses, in logistics, in outsourced services and in the impact of employee transportation or goods used by the company, and so on. These risks and sources of impact represent a company's indirect emissions, covered in Scope 3 of the GHG Protocol. Out of 76 companies that responded to the SBF120 CDP France questionnaire in 2007, 39% provided quantitative Scope 3 data.

In order to take better account of these impacts and "hidden risks," the *Supply Chain Project* assists different companies in their pro-environmental efforts, and widens the scope of analysis for risks and impacts. CDP aims at identifying ways to reduce GHG emissions throughout the value chain, beyond a company's core business. CDP helps coordinate a network of over 5,000 suppliers involved in the various stages of companies' value chains. It helps companies reduce resource wastage throughout the supply chain. The organization also helps these companies identify risks, opportunities and potential innovation areas, and helps heighten supplier awareness about the risks associated with climate change (physical risks, reputation, etc.) while supporting their efforts to progress.



Nigel Topping,
CDP Supply Chain Project Manager

Identifying new opportunities

Although global warming's magnitude and disastrous nature make addressing the associated risks the topmost priority, the CDP questionnaire also aims at "helping investors and companies focus on the opportunities associated with climate change" (James Cameron). Companies need to know how to identify and benefit from these new possibilities. Climate Change Capital, where James Cameron is vice-president, is but one example of an entrepreneurial success story in the new green economy. This firm is an investment manager and advisor specializing in the opportunities created by the transition to the low carbon economy.

The opportunities cited by companies surveyed include commercial opportunities; opportunities regarding climate change or GHG emission regulations; opportunities to develop a "green" economy or, lastly, in a very pragmatic approach to transparency, the positive impacts of physical consequences induced by climate change.

Instigating the transition toward a low carbon economy

Toward the "financialization" of climate change

By forging a link between financial markets and GHG emissions, CDP contributes to "financializing" carbon. Because GHG emissions are one of the most financialized environmental criteria, they are more likely to be included in investment choices and calculations. To illustrate, CDP results are now available not only on the CDP website, but also on the Bloomberg network. In addition to providing

access to CDP data, Bloomberg terminals also provide information on changes in the carbon market. This constitutes a new step toward the integration of the “CO₂” criterion in investment choices.

When financial considerations extend to sustainable development issues, we speak about Socially Responsible Investment (SRI). Although SRI has not yet entered the mainstream, it does contribute to a more thorough consideration of environmental criteria in investment decisions. This integration of environmental issues drives the creation of innovative financial instruments, which in turn may influence the choices of economic players. For instance, Xavier Desmadryl, SRI Research Manager at HSBC Global Asset Management, hopes to orient forestry companies toward sustainable management practices by issuing bonds backed by forestry assets that have been certified “sustainable.”

At the same time, the reduction of CO₂ emissions leads to major financing challenges. For example, while carbon sequestration technologies offer tremendous potential, developing them requires considerable amounts of research and the associated financing capacity. As Sir Nicholas Stern pointed out in the Stern Review, “If we don’t act, the overall costs and risks of climate change will be equivalent to losing at least 5% of global GDP each year, now and forever. In contrast, the costs of action - reducing greenhouse gas emissions to avoid the worst impacts of climate change - can be limited to around 1% of global GDP each year.”¹

Evoking these considerable financing needs, James Cameron highlighted the importance of the new distribution of financing capacities and the associated influential powers. Sovereign wealth funds in the Middle East and Asia as well as government funds in Norway or Australia can be vital sources of financing for the fight against global warming.

In addition, investing responsibly doesn’t mean “sacrificing yield.” In the energy sector, for instance, “pure-play renewable energy providers achieve results that are comparable to those of traditional, major market players such as EDF,” explains Xavier Desmadryl.

Desmadryl is, however, controversial when he affirms that the future role of SRI will be insignificant. This does not mean that “ESG” (Environmental, Social and Governance) criteria will never be integrated into investment decisions. On the contrary, instead of being bound to the SRI niche market, ESG criteria should be integrated as one of the key elements in mainstream asset management risk analysis.

Xavier Desmadryl also stressed that the CDP was used by HSBC to integrate ESG criteria in its investment decisions. A company’s level of CO₂ emissions is therefore an important criterion for evaluating its environmental profile.



Guiding consumers toward energy-efficient behaviors

Rethink taxation and develop a “price signal”

The challenge of financing the transition to a low carbon economy raises the issue of developing incentives. Although informing players and supporting pro-active approaches are laudable, the urgency of these issues means the time has come to enforce restrictions. For Claire Tutenuit, Delegate-General of EpE, “Economic players need a price signal. These measures may be unpopular, but they are necessary.” The tax on household waste is an interesting example of a restrictive system that has been effectively implemented. By rethinking taxation, we can orient companies and consumers toward eco-responsible choices, and at the same time generate the resources required to finance parallel projects (R & D, reducing carbon emission in developing countries, and so forth).

This type of thinking is in line with the objectives of MEEDDAT (French Ministry of Ecology, Energy, Sustainable Development and Land Use Planning) as well. Michèle Rousseau, Director of Economic Studies and Environmental Evaluations for MEEDDAT, notes, however, that we need to envisage “price signals” but without increasing the total rate of contributions. The French government-

¹ Stern Review Report on the Economics of Climate Change, Sir Nicholas Stern, 2006

subsidized 0% interest rate loans offered as incentive for building renovation provide an excellent example of this.

According to Mathieu Welhoff of ADEME (*Agence de l'Environnement et de la Maîtrise de l'Energie*, French Environment and Energy Management Agency), if consumers are to become more aware and better informed, the price criterion, featuring in particular a bonus-malus system, is a necessary means of orienting their choices.

As an insurer, AXA France employs a price incentive system to motivate consumers. In addition to developing preventive actions (for instance, in partnership with ADEME, AXA supports the "1,2,3 Environnement" program which promotes environmental management in small and medium-sized companies), AXA France offers special rates to encourage eco-responsible behavior. Jacques de Peretti, CEO of AXA Entreprise - AXA France, uses the example of building and vehicle insurance to illustrate. Such insurance policies distinguish HQE® (*Haute Qualité Environnementale* - high environmental quality) buildings from standard constructions, and hybrid cars from traditional models.

Jean-Yves Caneill, Project Manager for the Sustainable Development Division of EDF, emphasizes the importance of price signals. At a time when many electrical installations will soon need upgrading, EDF, as an energy producer, has a key role to play. "The choices made regarding the



equipment manufactured today will have an impact over the next 40 years," he explains. The right technology must be used in order to reduce carbon emissions created by the production of electricity. Collectively, if there is a clear signal about reducing emissions, if there is a price signal (carbon market), then climate change will eventually be included in technology selection criteria. Players must be able to base their investment calculations on long-term, instead of just short-term, marginal costs. This price signal must be the "right" signal; it must evolve in line with technologies and benefit from the full support of public players.

Building and designing cities differently: an essential means of reducing GHG emissions

An analysis of the carbon impact resulting from citizen and consumer habits shifts the focus onto key sectors in the fight against climate change.

Blaise Desbordes, Director of Sustainable Development Projects at Caisse des Dépôts, a French public financial institution, stresses the importance of the building sector and sustainable urban planning. The building industry has been labeled the "40%" sector, accountable for 40% of energy use, 40% of waste produced and 40% of raw materials use. Any carbon strategy needs to include a study into the building and urban planning industries, since they are so critical to achieving "Factor Four" - the division of GHG emissions by four compared to their 1990 level.

Given the ambitious objectives set by the *Grenelle de l'environnement*², it seems unthinkable today to build structures consuming 400, 500 or 600 kWh/m²/year. Moreover, the gargantuan task of renovating existing buildings must be undertaken. With 31 million French homes consuming an average of 250 to 300 kWh/M²/year, this will require a considerable amount of work. Although buildings consuming a mere 0 to 50kWh/m²/year exist in other countries, they are very seldom seen in France.

² The objectives of the *Grenelle de l'Environnement* bill regarding the building sector are:

- New buildings: reduction targets concern energy use. By end 2010, the primary energy consumption of all public and service industry buildings must be below 50 kWh/m²/year. By end 2012, this restriction will apply to all registered building permits. Lastly, by 2020 all buildings must be "positive energy buildings", meaning they produce more energy than they consume.
- Existing buildings: By 2020, energy consumption must be reduced by 38%, which means the equivalent of 120 million m² will require upgrading.

Users must also be made aware of and educated about good environmental practices in order to optimize buildings' energy efficiency. Occupant behavior during the operating phase of a building largely determines its actual energy efficiency.

Lastly, climate change-related issues require that cities be rethought in terms of location, functioning and transportation. Urban project management must expand to include a wider range of players and develop a dialogue-based approach in order to take account of the latest issues in sustainable development and better meet the expectations of each stakeholder.

The question of sustainable urban planning raises further questions about mobility and the environmental impact of transportation. Jean-Louis Jourdan, Director of Sustainable Development at SNCF, points out that the transportation sector produces 27% of CO₂ emissions in France. As an important player in this sector, SNCF has a role to fulfill in developing more ecological transportation solutions. The challenge is to develop an offer that is sufficiently attractive and adapted to reduce the ratio of cars in overall transportation use, to the benefit of trains. "When consumers choose to take the train instead of their car, they save 150g of CO₂ per kilometer," Jean-Louis Jourdan points out. SNCF is therefore striving to promote intermodal transportation by making room for new transportation modes. In particular, it needs to facilitate road/rail intermodality. SNCF also hopes to test a new "Green TGV" offer in 2009.

Better informed consumers lead to responsible purchasing



To guide consumers toward ecologically responsible choices, we must inform them, broaden their knowledge of the issues at stake and encourage company transparency. Labeling, one of the flagship projects resulting from the *Grenelle de l'environnement*, could meet this need for transparency and information while guiding consumers in their purchasing decisions. ADEME is currently working in partnership with AFNOR (*Association française de normalization* - French standardization organization) to define a single standard, and other innovative initiatives are fueling the study into labeling.

Marie-Christine Korniloff, Deputy Director of Sustainable Development at CNCE, a French commercial and investment bank, presented the labeling of CNCE financial instruments. By integrating sustainable development into its business, CNCE is striving to adapt its product offer and inform consumers about the associated sustainable development issues. In labeling financial instruments, CNCE has developed a unique project, since labeling is generally only used for tangible products. The lack of SRI options in retail banking was one of the factors behind the creation of this project. "SRI funds are too hard to sell to our customers," explains Marie-Christine Korniloff. The purpose of labeling is to improve product transparency with regard to sustainable development issues, particularly the carbon footprint. Instruments are ranked on the basis of three criteria: security, responsibility and climate. The project is also unique in that the labeling methodology is an *open source* development, meaning other banking sector players are free to use and develop it. Efforts made by CNCE can thus benefit the entire banking sector.

As a further example of the growing ecological labeling trend, SNCF's Jean-Louis Jourdan describes a CO₂ labeling project in which the CO₂ consumption of a given journey would be printed on the corresponding train ticket.

Lastly, the comment of an OECD representative caught our attention: "While labeling does allow consumers to be informed of the environmental impact of their purchases, it is essential to develop a comparative approach. When faced with a purchasing decision, the consumer needs to know the savings that will be achieved in terms of environmental impact." The development of pedagogical tools, such as an "eco-comparer", will enable consumers to easily integrate sustainable development criteria, in addition to financial criteria, into their purchasing acts. Consumers need to develop a comparative approach regarding the environmental impact of the products they buy.

Perspectives

Through its questionnaire, CDP observed that a growing number of companies are becoming aware of the risks and opportunities related to climate change. This year, the scope of the CDP questionnaire expanded from 18 to 24 countries, including China, which currently ranks highest in terms of CO₂ emissions. Corporate awareness of global warming issues has therefore widened geographically, in particular to encompass emerging countries.



Paul Dickinson, CEO of CDP

This awareness needs to expand to the entire value chain. Many risks and opportunities relating to climate change lie within this chain, meaning they are at the periphery of a company's core business. Paul Dickinson, CEO of CDP, says "Addressing climate change issues from now on should cover Scope 3 as defined by the GHG Protocol, and be based on overall product lifecycles." Companies could then truly identify the various, sometimes hidden risks and opportunities associated with climate change.

Given the urgency and magnitude of modern-day environmental and social issues, companies and investors must become full-fledged stakeholders in sustainable development. Governments also have an essential role to play in order to achieve GHG emission reduction targets. Although political will, reinforced by heightened citizen awareness, is growing stronger and development of a regulatory framework concerning the environment is underway, the movement must pick up speed, given the current stakes. Despite a more restrictive legal framework, global GHG emissions climbed by 24% between 1990 and 2004³. A new legal framework and new ways to orient investments still need to be developed. The implementation of incentive-based financing and price signals will largely depend on political will. Governments need to give economic players the means to achieve objectives, such as those set during the *Grenelle de l'Environnement* in France, or the "3 times 20"⁴ target defined by the European Union.

However, as Marie-Christine Korniloff points out, "Companies today need to see beyond the framework of governmental institutions." More and more companies are assuming their environmental and social responsibilities and are developing encouraging initiatives. They can draw on increasing consumer expectations for support. As Paul Dickinson reminds us, "Consumers have the power to orient the economy as they wish. But their wishes can change very quickly, and we can assume that they will not indefinitely finance an economy that has become so destructive to them, their children and the environment."

As economic players, it is up to companies to forge their own path instead of adopting a wait-and-see policy with regard to regulatory changes. In so doing, they will more effectively address contemporary global issues, control the associated risks and build sustainable development replete with new opportunities.

³ IPCC assessment report, *Climate Change 2007*, 2007.

⁴ In March 2007, European Leaders approved Commission proposals aimed at: reducing greenhouse gas emissions by at least 20% by 2020 (30% if other industrialized countries commit to a similar target and if the main emerging countries make contributions adapted to their situation); improving energy efficiency by 20%; achieving a rate of 20% of renewable energies by 2020.