

ACE European Group Report for ClimateWise July 2009

Environmental activity throughout the ACE Group of Companies is coordinated by ACE Limited, with additional activities being undertaken at local level.

1. Lead in Risk Analysis

With operations in more than 50 countries, ACE's business and operating models are exposed to the full impact of global climate change. While we welcome the opportunity to serve our clients, we also have an obligation to our shareholders to protect their capital and provide appropriate returns. Higher losses or higher volatility means higher insurance prices and may impact availability. This balance between policyholder and shareholder will be tested by climate change-driven events, particularly for risks and coverages where it is difficult to ascertain a fair loss cost and risk premium based on historical experience or scientific methods. For example, it is difficult today for insurance carriers to price and assume flood risk; this difficulty will likely increase as climate change makes flood perils more uncertain yet potentially more concerning to our clients. The pricing of casualty-related exposures will be made difficult by the unknown nature of some of the risks and the absence of historical precedent and data.

Catastrophe Models

ACE has been a leading proponent and user of catastrophe models to quantify natural catastrophe risk for product pricing, risk management and capital allocation purposes. These models rely heavily upon scientific and engineering knowledge drawn from past historical events to generate a series of hypothetical, yet plausible, events that can be used to assess each client's risk on a probabilistic basis.

ACE uses these models to aggregate and monitor its natural catastrophe exposures across its portfolio and ensure that its capital base is sufficiently strong to meet with regulatory, rating agency and policyholder expectations and provide shareholders with an appropriate risk-adjusted return.

On the other hand, the earth's climate appears to be changing in ways inconsistent with the historical record upon which catastrophe models draw data. We have adopted a more short-term view of event frequency that is higher than the long-term historical frequency.

Concerning North Atlantic hurricanes, for example, this emphasis on short-term data is founded on the assumption that we are in a period of heightened severe hurricane activity arising from the multi-decadal cycle, an observable historical phenomenon, rather than changes directly attributable to climate change. While ACE has adopted this change in frequency, the catastrophe modelling industry faces a serious challenge to appropriately address the evolving impact of climate change risk.

There are other limitations with catastrophe models. While the research, calibration and use of models are relatively well advanced in the United States and Europe for wind and earthquake perils, this is not the case for areas of increasing wealth and demographic concentration such as Asia, which are also catastrophe-prone. And in both developed and developing countries, modelling for secondary perils such as flood lags the science of wind and earthquake perils.

Research

To ensure that ACE is part of a broad climate change solution with its policyholders and private- and public-sector constituencies, the company is undertaking and supporting scientific-based research to enhance a modelling response to climate change as well as

participating in a number of leading environmental information forums. Specific activities include:

- Monitoring climate change-related scientific research through the use of scientific consultants and academics
- Supporting the research and use of catastrophe models in developing regions of the world and risk assessment of flood;
- Sponsoring research-based initiatives such as the Catastrophe Modelling Forum, conducted in 2007 and 2008 by the Centre for Health and the Global Environment at Harvard Medical School and the Insurance Information Institute;
- Working with modelling service providers and academicians to identify and implement climate change parameters in catastrophe models.

The use of models is but one part of the underwriting of catastrophe-exposed products (e.g., property, energy, marine or disaster mortgage protection), which also includes risk mitigation services through our risk management and site surveys, specification of terms and conditions in policies and the development of sound underwriting guidelines. The exposure approach afforded by our modelling and underwriting allows risk differentiation – and hence price differentiation – across existing and prospective clients.

Pricing Mechanisms

Clients that have been active in risk mitigation – through the use of tools such as retrofitting buildings to comply with updated building codes, installation of hurricane shutters and relocating exposures away from coastlines and flood plains – will have lower insurance costs than those clients not taking such measures. We also make use of terms and conditions such as sub-limits, coverage restrictions and deductibles to ensure appropriate risk selection and potentially reward certain policyholder behaviour. Importantly, these pricing mechanisms signal to the market incentives for improved risk mitigation behaviour and differentiate risks accordingly.

ACE is also actively engaged with regulators to ensure that pricing is actuarially sound and can be adapted to meet new and emerging climate change risks such as long-tailed casualty exposures and the capital implications of these risks. For ACE to continue to offer coverage under climate change conditions, pricing must always be set at sound actuarial rates that cover loss costs, expenses and risk margins on exposed capital. Thus, pricing must be flexible over time and by geography.

Unfortunately, many regulatory regimes impose the functional equivalent of price controls that are not built to react to developments, and encourage increased, rather than reduced, exposures.

Risk Transfer Mechanisms

Beyond modelling and pricing mechanisms, ACE also mitigates its exposure to climate change risk by actively hedging its portfolio of catastrophe risk in both the reinsurance and capital markets. Such hedging increases the amount of protection ACE can make available to its clients and forms a valuable part of the firm's overall risk management strategy. We are also committed to the development of the capital markets, with a broader capital base, as an alternative or complementary mechanism to hedge risks. Insurers can play a key role in the origination and underwriting of risk and its placement into the capital markets. Such a partnership, in conjunction with the public sector, will help transfer and spread the risks posed by climate change. We have demonstrated this commitment with the issuance of our own catastrophe bond, which provides ACE with fully-collateralized protection against earthquake and hurricane losses for its U.S. exposures. We will pursue additional instruments and risk transfer mechanisms as opportunities arise.

Successful risk transfer from the policyholder to the insurance and capital markets also requires industry standards around exposure data. We are committed to helping the industry

develop improved standards that will ultimately help increase risk transfer capacity and provide additional incentive for risk mitigation behaviour by policyholders.

2. Inform Public Policy Making

We will continue to work with Lloyds to engage in public debate on climate change and the need for action.

Participating in ACORD (<http://www.acord.org>), an industry body dedicated to developing industry standards around the structure and transfer of data;

Participating in ClimateResolve (<http://www.businessroundtable.org/climateresolve>), the United States Business Roundtable's initiative that seeks to have every company in every sector of the U.S. economy undertake voluntary actions to control greenhouse gas emissions;

We also have completed the Carbon Disclosure Project's annual survey (<http://www.cdproject.net>). The CDP is an independent not-for-profit organization aiming to create a lasting relationship between shareholders and corporations regarding the implications for shareholder value and commercial operations presented by climate change.

ACE believes that each company, regardless of size, has the responsibility to reduce its impact on the environment. ACE has committed to reduce emissions from its operations which in turn help to achieve national and global reduction targets.

In 2008, energy audits were completed by the Carbon Trust at our three main sites in the UK to identify energy efficiency improvements. Several improvements have been highlighted and have been incorporated within our property maintenance plan for 2009 and after.

These actions in the UK are part of ACE's global GHG management strategy that was developed to assist in the achievement of its US EPA Climate Leaders global GHG emissions reduction goal of eight percent per employee from 2006 to 2012. To meet this goal, ACE plans to initially concentrate on areas and activities in which it has direct control—specifically, energy reductions in owned buildings.

3. Support Climate Awareness Amongst Our Customers

ACE has made a commitment to developing insurance products and risk management services that facilitate market-based solutions to current and pending environmental and climate-related issues.

In 2008, ACE introduced ACE Green (www.acegreen.com), an Internet-based platform that highlights the full range of environmental and sustainability products and services available in every region in which ACE operates around the world.

These specialized products and services fall primarily in three areas:

- 1) Environmental Risk
- 2) Renewable Energy
- 3) "Green" initiatives.

However, these issues touch on virtually all lines of coverage worldwide, including traditional property and casualty business. Specialized environmental risks present a unique combination of scientific, political and financial factors that require specific technical expertise as well as local knowledge. ACE is among the largest and most advanced global underwriters of environmental liabilities and pollution risk, with ACE Environmental Risk units in North America, Europe and Asia.

ACE has developed targeted environmental risk products for every segment of the commercial market – from small business to global multinationals. Typical coverages include premises-based exposures, contractors and project pollution liability, professional liability, risks associated with biodiversity and natural resource protection, and an array of coverages for environmental clean-up projects.

As regulation and awareness increase, these coverages are growing in demand, not only from traditional “polluting” industries such as energy and chemical companies, but also from other organizations that own land or have potential liability – including governments, real estate owners and developers, agricultural entities and global consumer brands.

Renewable Energy

Another major ACE product area addressing these risks, particularly in light of the increased global attention to climate change, is the renewable energy sector. The urgent desire to develop clean, efficient alternative sources of energy is leading to the planning and construction of renewable energy projects all around the world. These projects take many different forms: biomass/biofuel, biogas, energy from waste, fuel cell, as well as solar, wind and hydro energy. Combining the product and risk management expertise from a number of ACE industry groups, including Construction, Energy and Marine, ACE addresses the risks that occur in the two main phases of a typical renewable energy project – construction and operation.

Construction risks range from delay in start-up to public or employer liability, whereas operation risks range from business interruption to premises pollution. ACE is also working with public and private stakeholders worldwide to develop risk transfer and risk management services that allow for innovative responses to the additional risks associated with implementing green initiatives. For example, ACE has a stand-alone property policy that provides coverage for commercial businesses that desire to rebuild to a “greener” standard in the event of a loss to an existing building.

Environmental Consulting

The company is also well positioned, through its third-party administrator ESIS, to provide environmental engineering and consulting services to clients, including a new practice area concerning energy efficiency and green buildings in the U.S. For example, in 2008 ESIS introduced its Leadership in Energy and Environmental Design (LEED) consulting capability. The LEED Green Building Rating System, administered by the U.S. Green Building Council, is a recognized benchmark for the design, construction and operation of high-performance green buildings. LEED gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings’ performance. LEED promotes a “whole-building” approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. For more information, visit www.usgbc.org/LEED.

ACE’s unique combination of risk appetite, expertise and financial strength will allow us to assume a leadership position in the developing areas of: 1) regulated carbon dioxide (CO₂) emissions; 2) political and trade-credit risks associated with the international trading of carbon credits generated from Clean Development Mechanism (CDM) projects under the Kyoto protocols and its multilateral successor agreements; 3) the potential for increased global regulation of greenhouse gases regardless of whether they require enhancements to existing products or an entirely new product line approach; and 4) emerging casualty exposures such as Directors and Officers (D&O).

4. Incorporate Climate Change Into Our Investment Strategies

ACE UK attended a Lloyds organised workshop on how to progress principle 4. Subsequently, in connection with the UK employee pension scheme, we are communicating with ACE fund managers to obtain information on their respective environmental policy and agree how this could be implemented. Currently within the employee pension scheme, employees can select an ethical/environmentally sound fund to invest in.

5. Reduce the Environmental Impact of Our Business

The global ACE network now encompasses approximately 15,000 employees working from nearly 250 offices in more than 50 countries. Although as an insurance company our “carbon footprint” is modest, we seek to reduce it even further. Climate change responsibility at ACE involves the participation of all of our employees in a global effort to reduce the environmental impact of our own internal operations.

This includes the reduction, reuse or recycling of resources, as well as efforts to reduce both the direct and indirect emissions generated from heating, cooling and lighting our offices and from company owned or leased vehicles.

In 2007, ACE joined the United States Environmental Protection Agency (EPA)-sponsored Climate Leaders program, an industry-government partnership that works with companies to develop long-term, comprehensive climate-change strategies. Partners set a companywide GHG reduction goal and inventory their emissions to measure progress. By reporting annual inventory data to the EPA, partners create a lasting record of their accomplishments, identify themselves as corporate environmental leaders, and strategically position themselves as climate change continues to unfold. For more information, please visit www.epa.gov/climateleaders

GHG Reporting

As the first step in this program in 2007, ACE reported its GHG emissions for the 2006 base year. This base year inventory was obtained via a web-based questionnaire that enabled office managers in each location to efficiently gather and return the proper data needed to quantify ACE’s GHG emissions. The data-gathering effort focused on the following areas: direct and indirect emissions of energy consumption at ACE-owned properties and ACE-leased properties where specific energy usage data is available; direct emissions from company-owned vehicles and aircraft; and indirect emissions generated from corporate business travel, an optional measure not required by the program.

The inventory identified a total of 64,451 metric tons of carbon dioxide equivalents (CO₂e) emitted globally in 2006. Of that total, 45,468 metric tons of carbon equivalents were within the company’s control, so that amount was established as the baseline for reduction targets. Areas that accounted for the difference between baseline and total estimated emissions were multi-tenant leased properties, where energy usage was not metered and could only be estimated and corporate business travel by employees outside of the U.S. and Bermuda, where data was not yet at an acceptable level of reliability. ACE plans to include emissions from international business travel in the future if reliable methods of data collection are made available.

For the 2007 inventory, ACE expanded its reporting boundaries by including direct and indirect emissions from all office locations, even those that do not have specific energy use data. For such locations, ACE used emissions per square foot regional averages to calculate their contribution to ACE’s total emissions. ACE believes the inclusion of these properties is necessary in order to fully report the magnitude of our carbon footprint. In addition, the method of estimation was made uniform across offices, resulting in better overall data quality.

As a result of changing the inventory boundaries, ACE recalculated its 2006 base year emissions, which are shown, along with the 2007 emissions totals, in the following list.

2006 Recalculated Emissions (metric tons CO₂e)

Stationary combustion 3,595

Mobile sources 8,755

Refrigerant 319

Electricity 32,828

Global Emission Total 45,497

U.S. & Bermuda Business

Travel 7,643

**Global Emission Total with U.S.
& Bermuda Business Travel 53,140****2007 Emissions (metric tons CO₂e)**

Stationary combustion 4,782

Mobile sources 7,439

Refrigerant 319

Electricity 32,691

Global Emission Total 45,231

U.S. & Bermuda Business

Travel 8,085

**Global Emission Total with U.S.
& Bermuda Business Travel 53,316**

In 2008, ACE acquired three companies, adding substantially to its employee population and real estate portfolio. The offices and fleet associated with these acquisitions are expected to increase our 2006 base year emissions by approximately 13,000 metric tons of CO₂e. As a result, the company will include these operations in its next emissions inventory, and will adjust and report the totals accordingly.

As ACE's carbon footprint grows with its businesses, so does the company's commitment to taking meaningful reduction measures. In 2008, in addition to completing the second annual inventory, ACE also formally announced its Climate Leaders global GHG emissions reduction goal of eight percent per employee from 2006 to 2012. To meet this goal, ACE plans to initially concentrate on areas and activities in which it has direct control—specifically, energy reductions in owned buildings. Some of the actions ACE has identified include:

- Lighting upgrades and heating/ventilation/air conditioning improvements in our largest owned facilities;
- Improving the fuel efficiency fleet average for ACE owned/leased vehicles in select regions;
- Encouraging virtual meetings to reduce commercial airline business travel; and
- Reducing real estate square footage by vacating underutilized locations and optimizing other spaces.

Local Initiatives

In addition to these corporate efforts, local initiatives are being developed and implemented around the world as part of the ACE Green global employee participation program, which calls for a commitment from all employees to raise environmental awareness and improve environmental efficiency in their local offices. Under this program, the manager of every ACE office has formed a local environmental committee that engages employee volunteers in the selection and tracking of environmental activities that impact ACE's internal operations. Efforts include plastic water bottle elimination in Bermuda, removal of Styrofoam from all U.S. offices, cell phone and battery recycling in several offices, and broad recycling programs around the world.

One common initiative started by most committees involved the switch from pure copy paper to copy paper with recycled content. This action sparked the development of ACE's U.S. Sustainable Purchasing Policy, which seeks to balance fiscal and environmental responsibilities by looking at the entire lifecycle cost of an item in addition to the environmental impact caused by production, transportation, use and disposal of a product.

Beyond its GHG reduction efforts, ACE is pursuing "green" building certification for its North American headquarters building in Philadelphia through the LEED program. In addition to the Philadelphia location, ACE is performing LEED feasibility studies for several office locations. However, because LEED certification may not be feasible at all ACE office locations, we have committed to reduce the environmental impact of our real estate portfolio by choosing "greener" leases, utilizing sustainable materials, and reducing office space when it aligns with our business needs.

Making a Difference in the Community

As the charitable arm of the ACE Group of Companies, the ACE Foundations support a mission to assist the communities in which our employees live and work. With the environment designated as one of three areas of focus, the ACE Foundations are committed to promoting a healthy and sustainable environment. One environmental funding area is conservation – supporting efforts such as reforestation projects and the conservation of land, water and wildlife. For the past four years, ACE has championed land conservation projects through the ACE Land Legacy Fund, managed by the Conservation Fund. Backed by grants totalling \$550,000, recent projects include funding to help secure the protection of 40 acres along the Delaware Bay's Prime Hook National Wildlife Refuge and 71 acres that will connect the Arabia Mountain Heritage Area with Panola Mountain State Park near Atlanta, Georgia.

In 2007, the ACE Land Legacy Fund via the Conservation Fund contributed to a broad collaborative effort to protect 257,000 acres within the boundaries of Adirondack Park, marking the completion of one of the largest land conservation projects in New York State's history. The Fund directly supported the Conservation Fund's North Coast Forestland Conservation Initiative, which preserved 16,000 acres in California's Mendocino County that comprise substantial portions of watersheds and that join with public lands to link 97,000 acres of protected land. Recently, more than 2,500 acres in Glatfelter Forest, near Gettysburg, Pennsylvania, an area targeted for conservation by the state due to its ecological and recreational significance, were protected through the Fund.

ACE also encourages employees to participate in environmentally-focused volunteer projects. For example, in Philadelphia, ACE has maintained a significant partnership with the Fairmount Park Conservancy's Growing the Neighbourhood Program. Fairmount Park is one of the largest and oldest municipally-operated park systems in the United States, encompassing 9,200 acres and including 63 neighbourhood and regional parks. In addition to financial assistance over the past five years, ACE employees have worked with local neighbourhood groups to support projects in local parks, significantly improving various aspects, from cleanliness and aesthetics to neighbourhood safety.

While these examples represent some of ACE's more significant environmentally-focused funding and volunteer projects, there are numerous other ongoing and pending projects around the world that represent ACE's community and philanthropic dedication to critical environmental issues.

6. Report and be Accountable

We provide an environmental summary report as part of our ACE European Group annual corporate brochure which is distributed to brokers and clients.

The ACE Green committee regularly reports to the ACE European Group Chairman & CEO.

ACE also reports in the US as part of membership of the US Environmental Protection Agency's Climate Leaders Program here <http://www.epa.gov/stateply/>

Globally ACE produces an environmental report on an annual basis which is available for download at www.acelimited.com