

Goldman Sachs 2007 Environmental Report

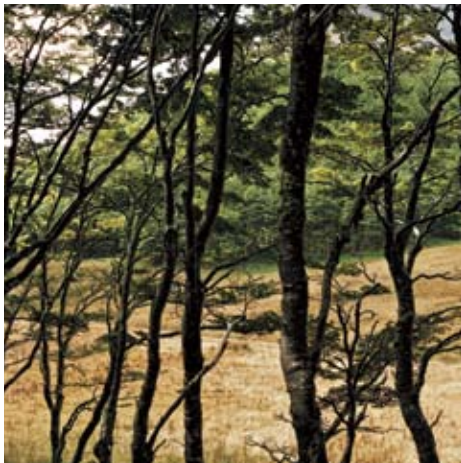


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Overview

In 2005, the Goldman Sachs Environmental Policy Framework set forth principles and commitments designed to maximize the firm's ability to contribute to a healthier environment.

Highlights of the [Goldman Sachs Environmental Policy Framework](#) ("Framework") include:

- Acknowledging that climate change is one of the greatest environmental challenges of the 21st century; that it is linked to other pressing economic and social issues; and that voluntary action alone cannot solve the climate change problem
- Calling for policies and actions based on science, rational economics, market-based mechanisms, conservation and efficient use of energy, and the development of integrated global solutions
- Stating our belief that capital markets can and should play an important role in creating opportunities to address today's environmental challenges, and that government can help the markets by establishing a strong policy framework that creates long-term value for greenhouse gas emissions reductions and incentivizes the development of technologies leading to a less carbon-intensive economy
- Recognizing that as a global company, Goldman Sachs has an impact on the environment through its operations and investments; that we should play a constructive role in helping address environmental challenges by committing our people, capital and ideas to find effective market-based solutions; and that such activity also serves our central business objectives of creating long-term value for our shareholders and serving the long-term interests of our clients
- Minimizing the impact of our own operations by adopting leading-edge environmental safeguards throughout Goldman Sachs' businesses and facilities, and training our people to ensure compliance with Goldman Sachs' environmental directives and policies
- Supporting the development of market-making and investment opportunities in environmental markets such as:
 - emissions trading, renewable energy credits and other climate-related commodities
 - renewable energy, alternative fuels and energy efficiency
 - natural resource and ecosystem management and services
 - other innovative, environmentally friendly technologies
- Systematically incorporating environmental, social and governance criteria into fundamental analysis of companies through our research arm
- Taking the environmental and social impacts and practices of our clients and potential clients into consideration as we make business selection and risk management decisions
- Establishing the Goldman Sachs Center for Environmental Markets to conduct, fund and disseminate research on market-based solutions to environmental issues through partnerships with academic and non-governmental organizations
- Instituting an annual review of the Framework and implementation, disclosing the environmental impact of our operations, and regularly reporting on progress against internal and external environmental standards through the Goldman Sachs Environmental Strategy Group

Since the Framework's release, we have made important progress toward meeting its objectives. In our [2006 Year-End Report](#), we highlighted steps taken at every level of our organization as well as issues that emerged as we began implementing the Framework. This year we are pleased to report continued engagement of our people, capital and ideas to explore market-based solutions to environmental challenges. We have also worked to provide more accurate documentation of our direct impact as we address the simultaneous responsibilities of supporting our growth and reducing our environmental footprint. Among other achievements in 2007, we:

- Continued our investment in alternative energy projects, to more than \$2 billion since 2005
- Expanded our carbon emissions product offerings and trading services to help clients manage risk in the emerging U.S. and Canadian compliance regimes and voluntary carbon offset markets
- Created a new catastrophe asset-backed security to help clients manage risks associated with climate change
- Increased our commitment to integrating environmental, social and governance (ESG) factors into our global investment research through the launch of the GS SUSTAIN focus list
- Enhanced guidelines to help investment banking and principal investing teams conduct due diligence on environmental and social issues and trained teams based in the United States in the use of the guidelines, with plans to complete training in Europe and Asia in 2008
- Developed an overall strategy for reducing the direct environmental impact of Goldman Sachs' operations, and refined baselines and methods for measuring our carbon emissions to enhance the accuracy of our disclosure
- Began integrating green building standards into new construction and renovation of Goldman Sachs facilities worldwide
- Disseminated research resulting from our Center for Environmental Markets' partnerships with academic and non-governmental organizations through conferences and publications
- Renewed our alliance with the Wildlife Conservation Society and continued our support for the conservation and preservation of native ecosystems in Karukinka on the island of Tierra del Fuego, Chile

Across this broad spectrum of activity, the people of Goldman Sachs have shown tremendous unanimity of spirit as they have explored ways to seek new business opportunities that benefit the environment while supporting a sustainable and strong economy. Our central objectives, as always, are to create long-term value for our shareholders and to serve the best interests of our clients. This report describes the breadth of our opportunity to achieve these objectives while having a positive impact on the larger world we all share.

Business Initiatives

We take seriously our responsibility for environmental stewardship and believe that as a leading global financial institution we should play a constructive role in helping to address the challenges facing the environment. To that end, we have been integrating environmental initiatives into each of our business areas and the services we provide to our clients.



Principal Investments

Under the Framework, Goldman Sachs has invested over \$2 billion worldwide in renewable energy, energy efficiency, clean technology and sustainable development.

The Framework committed the firm to make available up to \$1 billion for investments in renewable energy and energy efficiency projects. By the end of 2006, we had surpassed this goal with an aggregate investment of more than \$1.5 billion in alternative energy projects in the United States, Europe, and Asia. Technologies in which we invested included cellulosic ethanol, solar photovoltaics and wind turbine manufacturing. We also invested in Horizon Wind Energy, a developer and owner of wind farms, which grew under our ownership to more than 150 employees and a portfolio of more than 1,000 megawatts of wind farm projects before we sold the company to Energias de Portugal (EDP), a Portuguese utility, in July 2007.

In 2007, we made additional investments totaling more than \$600 million, and we are committed to facilitating commercial deployment of alternative energy and clean technology as viable investment opportunities become available. Some of the new technologies in which we have invested this year include:

- **LOAD SHIFTING:** Ice Energy produces commercial and residential energy storage units that shift energy consumption of air conditioning systems from peak to off-peak periods, reducing peak load requirements by as much as 95 percent.
- **ELECTRICITY TRANSMISSION AND USAGE:** Optimal Technologies develops solutions to help utilities, businesses and consumers optimize their energy usage and strengthen global access to reliable, affordable power.
- **WIND TURBINE MANUFACTURING:** Nordic Windpower is a leader in the commercialization of utility-scale wind turbine technology based on a lightweight, two-bladed design proven through ten years of successful operations.

- **WASTE RECYCLING:** Beijing Goldenway Bio-tech builds and operates recycling stations that turn food waste from restaurants and households into protein-rich microbial additives in feeds or fertilizers. The company is also one of the leading developers of micro-organisms for agricultural use in China.

Additionally, we have looked beyond renewable energy and energy efficiency technology to other areas of investment in keeping with our environmental commitments. In August 2007, we took a decisive step toward sustainable real estate development with an \$80 million commitment to the Bond Companies Sustainability Fund. The Bond Companies specializes in the development of sustainable urban infill real estate. Through the Sustainability Fund, Goldman Sachs and the Bond Companies will invest in developing and repositioning urban infill properties using sustainable building technology and management practices.

In addition, in December 2007, Goldman Sachs signed an agreement to invest in APX, Inc., a leading infrastructure provider for environmental markets in renewable energy and greenhouse gases including carbon commodities. APX helps to track, manage, and retire renewable energy certificates (RECs), energy efficiency and conservation certificates, carbon offset credits such as verified emissions reductions (VERs), and greenhouse gas emission allowances. APX provides the system of choice for every major renewable energy market in North America and greenhouse gas markets worldwide. The company, which is policy-neutral, is well positioned to be a leading provider of registry technology for the developing U.S. carbon market and can leverage this position for expansion into adjacent areas of the domestic and international carbon markets.

Trading and Capital Markets

As a market maker and financial innovator, Goldman Sachs provides products and services to help clients identify opportunities and respond to risks related to evolving carbon emissions regulations, climate change and other environmental issues.

Trading

In its role as a leading market maker in the carbon emissions markets, Goldman Sachs expanded its capacity in 2007 by establishing a new team in New York to complement the carbon emissions trading team in Europe and to provide innovative products to help clients manage risk in the emerging U.S. and Canadian compliance regimes. The team has also been working to develop environmentally credible products for entities that do not expect to be subject to compliance regulations but would like to implement voluntary measures to offset their greenhouse gas emissions. In addition, the team has shared its knowledge and experience of international carbon markets with domestic policy makers at the state, regional and federal levels to help inform the design of efficient market-based mechanisms in the United States.

In Europe, we have been engaged in the carbon emissions market since January 2005. We continue to take principal risk positions in carbon emissions for the European market through the EU Emissions Trading System (ETS) and deliver Kyoto Protocol-approved emissions reductions to European and other Kyoto markets. These traders are supported by global sales and strategy teams in London, New York, Tokyo and Singapore.

Our activities in the carbon emissions market include originating projects, purchasing forward credit streams, and marketing various credit products, such as spot and forwards, electronic futures, cash settled swaps, options and unique hybrid baskets. We also continue to act as market maker for other climate- and energy-related commodities, such as sulfur dioxide (SO₂), weather derivatives and renewable energy credits (RECs).

Capital Markets

Goldman Sachs continues to create new financial products that protect companies from risks associated with climate change. Many of our clients, including insurance and reinsurance companies, face the possibility of significant economic losses in conjunction with hurricanes and other natural catastrophes. Increasingly, these clients are using capital-markets solutions for financial protection. We strive to be a market leader in creating and placing such solutions via mechanisms including “catastrophe bond” and “sidecar” issuances, which can be attractive to institutional investors seeking to diversify their portfolios. In May 2007, we created the first actively managed catastrophe asset-backed security. This security provides a new opportunity for capital markets participants to invest in a portfolio of diversified risks and a new source of capital for our insurance and reinsurance clients.

Global Investment Research

In 2007, Goldman Sachs' Global Investment Research division expanded the integration of environmental, social and governance analysis with fundamental research of economies, industries and companies through the introduction of the GS SUSTAIN focus list, the expansion of Alternative Energy and Environmental Technology company coverage, and Global Economics Research focused on macro-economic themes and the environment.

GS SUSTAIN

GS SUSTAIN research combines our analysis of the sustainability of corporate performance with traditional fundamental analysis. It uses our proprietary framework for analyzing competitive advantage in mature industries and identifying winners in emerging industries, including alternative energy, environmental technology and bio-technology. The result is a set of objective metrics on environmental, social and governance (ESG) issues, which can be integrated with overall measures of corporate performance, industry themes, and returns-based valuation methodologies to highlight long-term investment ideas for investors.

In June 2007, Goldman Sachs' Global Investment Research team introduced the GS SUSTAIN focus list, which is aimed at long-term, long only performance, with a low turnover of ideas. As of December 31, 2007, the list included 27 identified leaders in mature industries, which we believe are set to undergo structural change or maintain a leadership position, and 26 attractively valued leaders in emerging industries. The list comprises approximately 2 percent of Goldman Sachs Research's global coverage universe. In July 2007, Goldman Sachs presented the GS SUSTAIN focus list and research findings at the [United Nations Global Compact Leaders Summit](#) in Geneva, Switzerland.

Global Alternative Energy Research

Global Alternative Energy Research now covers more than 70 alternative energy companies around the world, including producers of wind, solar, biofuels, geothermal and fuel cell technologies, and over 35 environmental technology companies, including companies developing water, waste and recycling solutions. In May 2007, more than 900 investors, regulators, market participants and venture capitalists attended our two-day Second Annual Alternative Energy Conference in New York.

Global Economic Research

Global Economic Research conducts global macroeconomic research on environmental themes such as the impact of climate change, energy efficiency, energy policy, and the challenges of reconciling environmental protection with economic growth. This research also encompasses demographic themes such as aging populations, urbanization, and the role of women in global economies.

Our research analysts around the world meet regularly with investors and companies to discuss the challenges and opportunities presented by ESG issues. The GS SUSTAIN team frequently participates in investment industry conferences, investor conference calls and other external forums to discuss ESG issues and structural changes in global industries.

Please see [Appendix A](#) for a list of research reports.

Business Selection and Environmental Advisory

Goldman Sachs believes that it is important to take the environmental and social impacts and practices of our clients and potential clients into consideration when we make business selection decisions.

As an advisor and provider of capital, we regularly help clients incorporate environmental and social factors into their business decision making. We believe that we can provide important, differentiated advice to our clients by helping them develop business strategies that take advantage of opportunities and mitigate risks arising from these factors.

All investment banking and principal investing teams conduct thorough due diligence on relevant environmental and social issues prior to our engagement in a transaction. Key committees at the firm review the teams' findings and provide input. In 2007, we developed a comprehensive set of guidelines to help teams with this process, and we have conducted training for our investment banking and principal investing teams in the United States to ensure that the guidelines are applied consistently. In early 2008, we will complete this training with sessions in Europe and Asia.

This process enables us to help clients evaluate their current practices and identify new opportunities in such areas as environmental and social awareness and management, transparency, stakeholder engagement, and health and safety. We seek to provide the best advice to our clients not only by identifying concerns, but also by working with company management to develop and implement solutions that will ultimately enhance long-term shareholder value.

Two transactions in which we have recently been involved highlight our evolving expertise in this area:

- **TXU CORP.:** In October 2007, TXU Corp. was taken private in a \$44 billion leveraged buyout by an investor group led by Kohlberg Kravis Roberts & Co. (KKR), TPG Capital and GS Capital Partners. In addition to being an equity

participant, Goldman Sachs acted as advisor to the investor group and led the transaction financing. This transaction was notable not only for being the largest LBO in history, but also for the strong environmental focus that was a cornerstone of the deal. Prior to the investor group's involvement, TXU had announced a highly controversial plan to build 11 new pulverized coal-fired units (8,600 MW of capacity) to meet Texas' growing energy demand. The take-private structure, announced in February 2007, incorporated significant improvements to TXU's environmental policy, including a reduction in the number of new coal units from 11 to 3, an aggressive demand-side management program, increased investment in alternative energy technologies, and the creation of a Sustainable Energy Advisory Board to advise the company on its climate stewardship. Two notable environmental groups, Environmental Defense and the Natural Resources Defense Council, were consulted as the new plan was developed and endorsed the resulting transaction upon announcement.

- **ENERGY CORP.:** In November 2007, Entergy Corp. announced that it was pursuing the separation of its non-utility nuclear business (SpinCo) from its regulated utility business via a tax-free spin-off to Entergy shareholders, allowing both companies to better optimize capital and commodity hedging decisions. SpinCo will be uniquely positioned as the only pure-play, emission-free nuclear power generating company in the United States. With nearly 5,000 MW of nuclear generation located primarily in the northeastern United States, the company's CO₂-advantaged, baseload resources will meet both environmental and energy needs. The transaction is subject to regulatory approval, and Entergy is targeting a closing date in the third quarter of 2008. Goldman Sachs is acting as financial advisor to Entergy on this transaction.



Direct Impact

We recognize that an effective environmental policy must begin with a focus on minimizing the impact of our own operations. Accordingly, we are committed to adopting leading-edge environmental safeguards throughout our facilities and business practices.

Carbon Emissions

Since the Framework's release in 2005, we have studied and implemented a broad range of measures in order to understand our sources of energy demand and indirect carbon emissions; reduce indirect greenhouse gas emissions from our leased and owned offices; develop uniform green building standards for the construction and renovation of our facilities; develop environmentally sound supplier selection and procurement practices; and report our progress in a consistent and transparent manner.

In 2006, we addressed the crucial underlying task of developing environmental reporting systems encompassing all Goldman Sachs facilities. A key objective was the establishment of a system to collect data and apply consistent, accurate, meaningful standards. We began by centralizing our global information to create a uniform base for measuring and evaluating our environmental impact. Building on this base, we then developed additional metrics of environmental performance that could be applied locally, regionally and globally. As work continued in 2007, we also found more accurate ways to calculate our baseline, measure efficiency gains in our offices and benchmark other facilities.

The emissions data captures Goldman Sachs' indirect emissions from 103 core office facilities, including those of wholly owned subsidiaries and owned and co-located data centers.

Calculations are based on usage at facilities greater than 5,000 square feet, which comprise 99 percent of all Goldman Sachs' rentable square footage. The vast majority of this usage is metered, but in the case of rent-inclusive facilities, emissions have been estimated.

Adjustments to the 2005 Carbon Emissions Baseline

We made three adjustments to our 2005 baseline to enhance consistency across the portfolio:

1. We incorporated the carbon emissions associated with our co-located data centers. In 2005, the firm leased space in four co-located data centers in the Americas, adding 8,277 metric tons of carbon and resulting in a revised 2005 baseline of 207,773 metric tons of carbon. Co-located data centers will be included in carbon emissions reporting going forward.
2. We changed our basis for square-foot calculations from occupied square feet to rentable square feet for a more objective measurement. In 2005, the firm held 10,926,532 rentable square feet.
3. We integrated 2005 emissions related to 2006 acquisitions and divestitures of wholly owned subsidiaries. There was no change to the 2005 baseline as a result of 2006 acquisitions or divestitures.

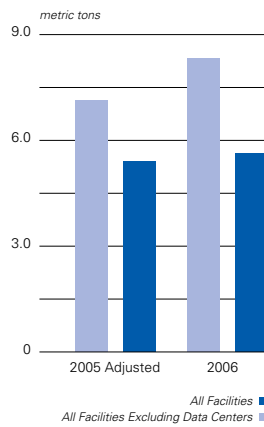
2006 Carbon Emissions

In 2006, carbon emissions increased to 244,847 metric tons over the firm's adjusted 2005 baseline of 207,773 metric tons. This increase is primarily due to growth in data centers, as well as increased headcount and rentable square feet in global facilities.

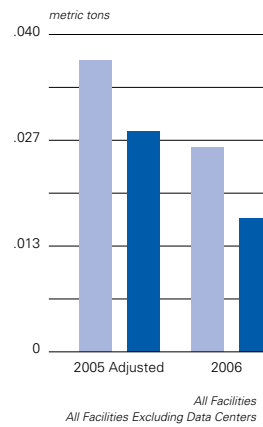
Please see [Appendix B](#) for the reporting methodology.

	Absolute Value 2005 Adjusted Baseline	Absolute Value 2006	Variance 2006 vs. 2005 Adjusted Baseline
Global Carbon Emissions Summary			
Global Facilities Reported	102	103	1*
Total Rentable Square Feet Area	10,926,532 SF	11,266,377 SF	339,845 SF
Total Occupied Area	–	–	–
Total Global Full-Time Employees	29,135	29,453	318
Actual Utility Consumption			
Electricity	397,592,301kWh	463,179,866 kWh	65,587,565 kWh
Gas	1,200,201 Therms	2,079,277 Therms	879,076 Therms
Steam	27,292 MLbs	52,707 MLbs	25,415 MLbs
Oil	53,830 Gallons	61,465 Gallons	7,635 Gallons
Carbon Emissions Equivalents			
Electric–Metered	174,932 MT	193,224 MT	18,292 MT
Electric–Estimated	24,269 MT	36,444 MT	12,175 MT
Gas–Metered	6,361 MT	11,020 MT	4,659 MT
Steam–Metered	1,657 MT	3,526 MT	1,869 MT
Oil–Metered	554 MT	633 MT	79 MT
<i>Total Global Carbon Emissions</i>	207,773 MT	244,847 MT	37,074 MT
<i>Total Global Carbon Emissions (excluding data centers)</i>	157,125 MT	165,612 MT	8,487 MT
Emissions Analysis			
Emissions/FTE	7.13 MT/FTE	8.31 MT/FTE	17%
Emissions/FTE (excluding data centers)	5.41 MT/FTE	5.63 MT/FTE	4%
Emissions/SF	0.019 MT/SF	0.022 MT/SF	16%
Emissions/SF (excluding data centers)	0.0151 MT/SF	0.0154 MT/SF	2%
Emissions/\$ Net Revenue	0.037 MT/\$	0.026 MT/\$	-30%
Emissions/\$ Net Revenue (excluding data centers)	0.028 MT/\$	0.017 MT/\$	-39%

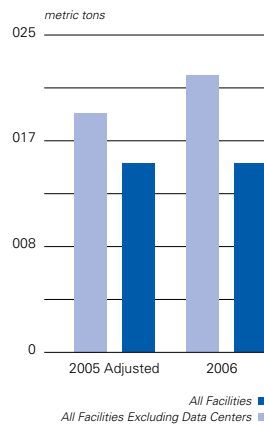
* Co-location/Compute Farm: Sentinel in Needham, MA



Emissions per Full Time Employee (FTE)
In 2006, emissions per FTE increased by 17 percent over 2005, from 7.13 to 8.31 metric tons per FTE. This increase is largely a result of an increase in worldwide data center capacity. Excluding data centers, emissions per FTE increased by 4 percent, from 5.41 to 5.63 metric tons per FTE.



Emissions per Dollar Net Revenue
In 2006, the firm's emissions per dollar net revenue decreased by 30 percent, from 0.037 metric tons to 0.026 metric tons for all facilities. Excluding data centers, emissions per dollar net revenue decreased by 39 percent, from 0.028 to 0.017 metric tons per dollar net revenue.



Emissions per Square Foot
In 2006, the firm's global footprint increased by 3 percent to 11,266,377 square feet, while emissions per square foot increased by 16 percent from 0.019 to 0.022 metric tons per square foot. Excluding data centers, emissions per square foot increased by 2 percent, from 0.0151 to 0.0154 metric tons per square foot.

Emissions Reduction

The 2006 results reflect the challenge of slowing the growth of emissions despite the continued expansion of the firm's real estate portfolio, population and the data processing capacity required to support that expansion. They also reflect the early stages of our carbon emissions reduction efforts. In 2006, we focused on creating the foundation for ongoing carbon emissions tracking through the development of a system to collect data and apply standards to determine our 2005 baseline.

In 2007, we began the next phase of these efforts with the adoption of a global carbon emissions reduction framework that includes the following initiatives:

- Consolidating into energy-efficient real estate through construction of LEED®-certified facilities
- Improving space utilization through workplace standards and increased occupancy rates
- Consolidating data centers to increase efficiency
- Implementing demand management and energy conservation measures at existing facilities

We continue to focus on improving the energy efficiency of existing facilities and identifying additional energy-saving opportunities through energy audits and benchmarking. Efficiency measures implemented in 2007 include:

- Resetting office temperatures in Tokyo and Hong Kong to reduce loads on air conditioning and heating systems
- Evaluating operating hours for air conditioning systems at all London office facilities and reducing runtime schedules where compatible with office requirements
- Implementing numerous local and regional energy-efficiency projects, including a lighting retrofit in Bangalore, improved lighting controls in infrastructure and technology equipment areas in Asia, and increased use of free cooling operational modes in our data center facility in Carteret, New Jersey

- Utilizing high-efficiency components when repairing or replacing failed electrical and mechanical equipment
- Installing technologies to reduce the energy consumed in hospitality areas, such as timers on the water boilers at all teapoints in London and sensors on our vending machines in Tokyo, which led to a 35 percent energy reduction

Technology

Technology growth in support of Goldman Sachs' expanding and increasingly complex businesses and operations has brought additional environmental challenges. We continue to evaluate new and emerging technology options for their ability to help meet these challenges and improve energy efficiency. We also actively engage with key vendors and industry leaders in the search for innovative technology and computing solutions.

Technology initiatives deployed this year include:

- Participating in forums with IT experts to discuss critical aspects of data center management and encourage consumer influence on the industry to advance power efficiency
- Increasing virtualization to enhance efficiency and utilization of PCs, servers and data centers
- Piloting enterprise desktop power saving in Europe by centrally programming desktop PCs to standby in off-hours
- Evaluating all new computing hardware purchases for power usage and adopting energy-efficient platforms, such as blade form factors
- Commissioning a study on internal computing growth and raising awareness of best practices in energy usage

Outside Reporting

Since 2006, Goldman Sachs has been a signatory to the [Carbon Disclosure Project](#) (CDP), a global nonprofit organization seeking to facilitate informed dialogue among shareholders and corporations for the purpose of creating a rational response to climate change. The CDP web site is the largest repository of corporate greenhouse gas emissions data in the world.

Green Buildings

Under the Framework, the firm developed uniform green building standards for use in construction and major renovation of facilities with the goal of ensuring that all such future projects at Goldman Sachs meet the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) Gold certification or other whole-building standards.

At the end of 2006, the global real estate team was trained on how to implement the green building standards, which cover virtually every aspect of building materials and systems that can affect energy and water consumption, waste, greenhouse gas emissions, occupant health and safety, and the sustainability of underlying resources and technologies.

In 2007, all new capital projects, fit-out and new construction began incorporating the firm's green building standards globally. To aid in implementation, all real estate consultant contracts and service agreements in the Americas, Europe and Asia were modified to include adherence to the firm's Environmental Policy Framework. Training of our global real estate team will be ongoing as the market evolves in each region.

Regional Highlights

AMERICAS: Under the newly revised LEED submission process, project teams can pre-submit design credits to be awarded before final building certification. In 2007, the firm's new global headquarters, currently under construction in lower Manhattan, was awarded 21 out of the total anticipated 46 LEED Gold credits. Final certification is expected after the building's completion in 2009.

EUROPE: The firm has engaged a LEED consultant for its new London Data Center project. The design of the space has been environmentally conscientious from project inception and will serve as a baseline for future data center projects in the region. Also, new environmentally advanced carpet standards and Forest Stewardship Council (FSC)-certified furniture contracts are in place and are the new standard throughout the region.

ASIA: The newly completed trading floor expansion in Singapore incorporated many of the firm's green building standards. Over 60 percent of materials were re-used from the existing space and the trading floor was furnished with certified low-emissions workstations and seating. Fixtures and finishes include high-efficiency lamps and ballasts as well as low-VOC paints, adhesives and carpet.

Responsible Products and Programs

In 2007, we continued to implement changes in daily operations to meet higher standards of environmentally responsible practice.

Paper Reduction

The firm implemented the following initiatives to reduce paper consumption:

- Converted Goldman Sachs daily client trade confirms to double-sided printing, and adopted a plain white backer, eliminating pre-printed forms
- Transferred Prime Brokerage client notifications of trades to double-sided printing
- Eliminated printing of statements and confirms for more than 500 Goldman Sachs intercompany accounts and transitioned to electronic statements
- Eliminated printing and delivery of prospectuses for mortgage deals by adopting the Access Equals Delivery electronic model

Through these efforts, we anticipate environmental savings of 14.9 million sheets or 178,800 pounds of paper, which translates to:

Type of Impact	Environmental Savings
Wood Use	1,502 trees
Total Energy	33 homes/year
Carbon dioxide (CO ₂)	427,531 pounds/year
Nitrogen oxides (NO _x)	6 18-wheelers/year
Particulates	87 buses/year
Solid Waste	6 garbage trucks

Environmental impact estimates were made using the Environmental Defense Paper Calculator. For more information visit <http://www.papercalculator.org>.

- We are in the process of implementing double-sided printing on black-and-white floor printers and copiers in the firm’s major hub cities and several regional offices.

Use of Paper with Recycled Content

The firm continued to introduce paper with recycled content through the following initiatives:

- Introduced copy paper with recycled content in Dallas, London, Miami, Paris, and Tokyo:
 - London: locally produced and contains 75 percent recycled content
 - Dallas, Miami, Paris and Tokyo: contains 10-70 percent recycled content
- Printed seasonal greeting cards on FSC-certified paper in London and New York with 30-75 percent recycled content
- Printed seasonal greeting cards in Beijing, Hong Kong, Seoul, Singapore and Taipei with 30-75 percent recycled content
- Printed the Goldman Sachs 2006 Annual Report on FSC-certified paper with 18 percent mixed sources

We anticipate environmental savings from these efforts as follows:

Type of Impact	Environmental Savings
Wood Use	4,864 trees
Total Energy	40 homes/year
Carbon dioxide (CO ₂)	427,992 pounds/year
Nitrogen oxides (NO _x)	9 18-wheelers/year
Particulates	94 buses/year
Solid Waste	14 garbage trucks

Environmental impact estimates were made using the Environmental Defense Paper Calculator. For more information visit <http://www.papercalculator.org>.

Ride Sharing and Increased Use of Hybrid Vehicles

- Our Executive Transportation Program in New York has increased its use of hybrid vehicles and continues to seek new vendors for this program while working with current vendors to add hybrid vehicles to their fleets. Our Boston and San Francisco offices also launched environmental car service options.
- Car sharing is now in place in New York and London.

We calculate that these efforts will reduce annual carbon emissions by 233 metric tons, which equates to:

Environmental Savings

59 passenger cars not driven for one year
31,093 gallons of gasoline
635 barrels of oil
3.7 tanker trucks filled with gasoline
35 households' electricity usage for one year
7,000 tree seedlings grown for 10 years
228 acres of pine or fir forests storing carbon for one year
2.2 acres of forest preserved from deforestation
11,375 propane cylinders used for home barbecues
1.4 railcars of coal burned
92 tons of waste recycled instead of landfilled

Environmental estimates were made using The U.S. Climate Technology Cooperation Gateway Greenhouse Gas Equivalencies Calculator. For more information visit <http://www.usctcgateway.gov/tool/>.

Elimination of Styrofoam/Polystyrene Products

In 2007, the firm completed the elimination of Styrofoam food and beverage containers and converted all paper and plastics to recyclable products in cafes, catering, private dining rooms, pantries/teapoints and vending in Dallas, Hong Kong, London, New York, San Francisco and Washington, D.C.

The anticipated reduction in annual Styrofoam consumption is 18 million cups and 1.3 million plates and containers, which translates to 310,874 pounds of nonbiodegradable Styrofoam/polystyrene averted from landfills.

Environmental Networks

Across the globe, the people of Goldman Sachs have demonstrated their interest in building awareness of environmental initiatives and responsible behavior through the creation of environmental networks. Since 2006, employee-led environmental networks have begun operating in cities worldwide, including Bangalore, Chicago, Jersey City, London, Los Angeles, Miami, New York, Philadelphia, Salt Lake City, San Francisco, Seattle, Toronto and Washington, D.C. Working closely with the Corporate Services and Real Estate team, these networks have initiated office-wide communication and campaigns to promote recycling, reduce paper consumption, and provide useful tips to help employees apply conservation measures both at home and at work.

Please see [Appendix C](#) for other responsible products and program initiatives.

Cogentrix

As part of the Framework, we also committed to reporting and reducing, whenever practical, the carbon emissions of Cogentrix Energy, Inc., a Goldman Sachs subsidiary that operates independent power plants throughout the United States.

2006 Total Carbon Emissions Summary*	Solid Fuel Sites	Gas Fuel Sites	Total
Total Site Emissions			
Total Power Generation CO ₂ Emissions (tons)	15,858,048	3,776,199	19,634,246
CO ₂ emissions for energy production (tons)	15,163,090	3,730,863	18,893,954
Net MWh generated	11,999,955	7,591,674	19,591,629
Total MWh generated (Net + Steam)	13,184,980	7,767,040	20,952,020
Ton CO ₂ per Net MWh	1.26	0.49	0.96
Ton CO ₂ per (Net + Steam) MWh	1.20	0.49	0.94
Site Percentage Ownership Based Emissions			
Total Power Generation CO ₂ Emissions (tons)	14,333,592	2,620,235	16,953,827
CO ₂ emissions for energy production (tons)	13,672,648	2,601,495	16,274,143

* Cogentrix adopted the general reporting protocol of California. Please see [Appendix B](#) for more details on methodology.

In accordance with the firm's Environmental Policy Framework, Cogentrix has vigorously pursued ways to reduce direct carbon emissions while exploring innovative technologies and partnering with other organizations to bring practical, clean power generation solutions to the rest of the industry.

In 2007, Cogentrix began the installation of new flue gas desulfurization equipment (scrubbers) at its wholly owned Hopewell and Portsmouth coal-fired units in Virginia. The addition of the scrubbers is expected to reduce sulfur dioxide and acid gas emissions by a further 90 percent beyond current compliance with environmental regulations. With the project's completion in the first half of 2008, 100 percent of Cogentrix's solid-fuel-fired fleet will be sulfur-controlled via scrubbing or circulating fluidized bed technology.

Work continued under Cogentrix's agreements with Carbozyme, Inc. and the U.S. Department of Energy. Cogentrix's generation station at Carneys Point, New Jersey, was selected as a demonstration site for Carbozyme's innovative carbon capture and sequestration technology, which uses enzyme-based liquid membranes to capture and separate carbon dioxide from flue gas stacks.

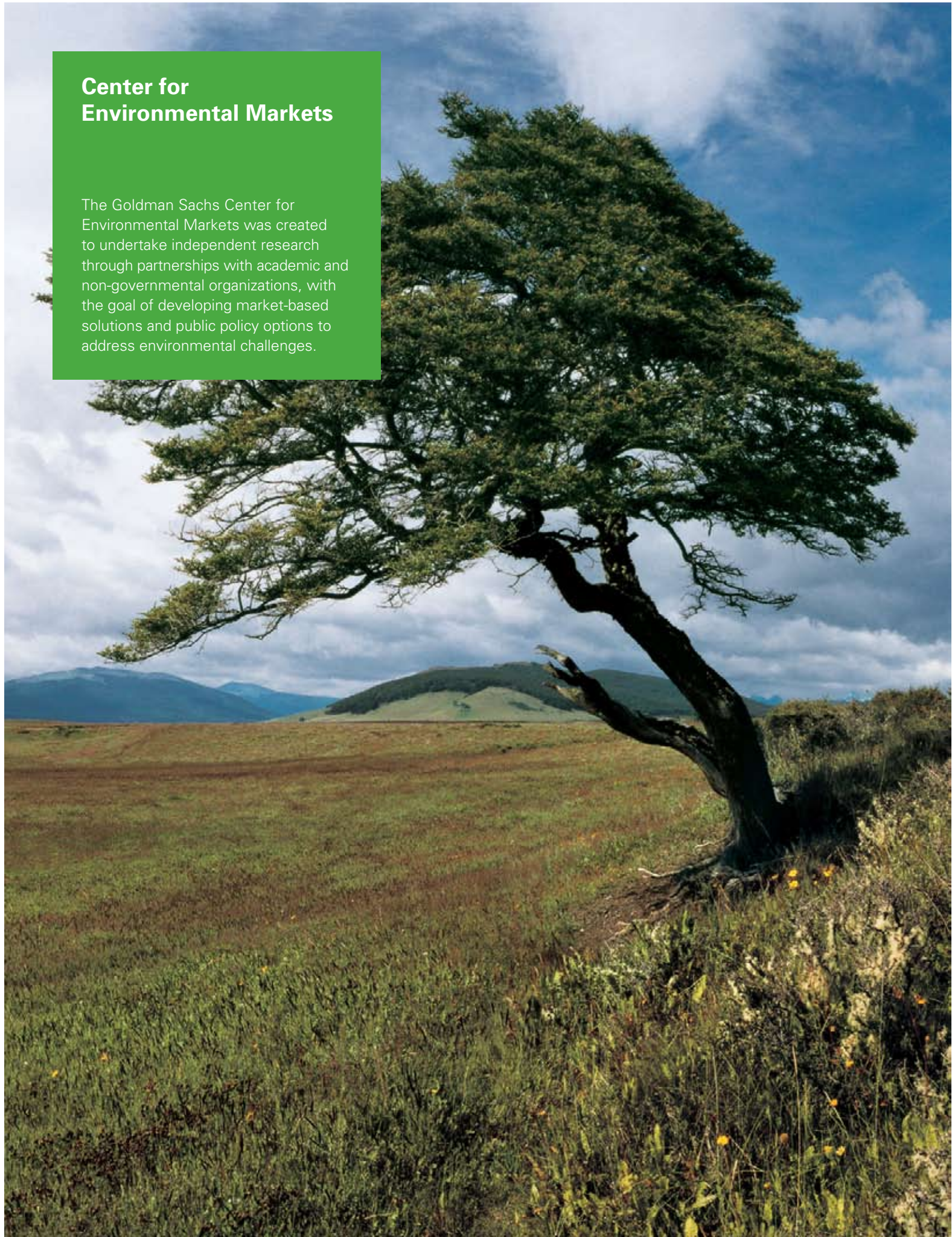
Also in 2007, Goldman Sachs and Cogentrix expanded their relationship with Gridpoint, Inc., with an additional \$16 million investment. Gridpoint's "smart grid" technology provides intelligent management of distributed resources to control loads, store energy and produce power, improving efficiency from utility to consumer while creating a practical path for integrating new clean technologies into existing infrastructure. In September, Gridpoint was chosen by *AlwaysOn* as the Overall Winner among the GoingGreen 100 Top Private Companies for 2007.

Other Cogentrix initiatives launched in 2007 include increased investments in new renewable and alternative low-carbon power generation resources. A nationwide exclusive relationship with Markron Technologies focuses on the use of solar thermal energy for supplementary generation at existing coal-fired units. Other projects include environmentally advanced applications of solid fuel gasification and the utilization of carbon-neutral solid fuels to co-fire existing solid-fuel-fired projects.

In November 2007, Cogentrix sold 80 percent of its interest in 14 of the 18 power generation plants in the Cogentrix portfolio to Energy Investors Funds. In future environmental reports we will continue to disclose emissions reflecting the reduced ownership stake remaining with Goldman Sachs.

Center for Environmental Markets

The Goldman Sachs Center for Environmental Markets was created to undertake independent research through partnerships with academic and non-governmental organizations, with the goal of developing market-based solutions and public policy options to address environmental challenges.



In addition to making three new grants in 2007, the Center for Environmental Markets disseminated the research and findings of its initial projects through a combination of publications, conferences, strategic communications and targeted outreach to engage and educate clients, investors and policy makers on climate change and other environmental issues.

The Center for Environmental Markets' first three grants, awarded in 2006, totaled \$2.3 million. The recipients included Resources for the Future (RFF), the World Resources Institute (WRI) and the Woods Hole Research Center (WHRC).

Resources for the Future

The Center supported and served as a member of the U.S. Climate Policy Forum, an initiative of RFF's Climate and Technology Policy Program. Over a 15-month period, the Forum brought RFF researchers together with business leaders from 23 companies representing a broad spectrum of the U.S. economy to discuss key aspects and implications of a federal U.S. climate policy. The Forum's objective was not to advocate on behalf of a specific course of action, but to provide a process for informed dialogue on a wide range of policy options.

On November 28, 2007, RFF released "Assessing U.S. Climate Policy Options: A report summarizing work at RFF as part of the inter-industry U.S. Climate Policy Forum," a collection of 15 independent issue briefs based on economic analysis and informed by the Climate Policy Forum dialogue. A key objective of the issue briefs contained in the document is to provide legislators with well-vetted, detailed policy options, important criteria for policy assessment, and well-articulated concerns (specifying the strengths and weaknesses of different approaches) from which effective federal policy might be crafted.

World Resources Institute

The Center partnered with WRI for a two-year project, based on Socolow and Pacala's "Wedges" framework, to analyze the viability of various

technology options that could be deployed at scale to reduce greenhouse gas emissions and diversify the world's energy sources.

In April 2007, WRI produced a report entitled "Scaling Up: Global Technology Deployment to Stabilize Emissions," which provides an overview of the broad interaction between technology, policy, and investment in the alternative energy sector. In December 2007, WRI released "Plants at the Pump: Biofuels, Climate Change and Sustainability," which analyzes the opportunities and challenges arising from the scale-up of biofuels, assessing these impacts from a technology, policy and investment perspective. Goldman Sachs and WRI are currently working on additional papers under this framework which assess the scale-up of further alternative energy options, including "clean coal"/carbon capture and storage.

Woods Hole Research Center

As part of a commitment to the Clinton Global Initiative, the Center partnered with the WHRC on a three-year project to examine how to value forest ecosystems and analyze economic alternatives to rainforest destruction. Competing economic and environmental demands on forests, including timber, land, soils, water, vegetation and carbon capture, necessitate a method of valuing these ecosystems and their associated services when assessing the costs and benefits of various land use decisions. This project aims to understand how to value sustainable management of forest ecosystem resources and services at the local, national and international levels.

In 2007, the Center made three new grants:

The Prince's Rainforests Project

The Center is a corporate partner in The Prince's Rainforests Project, which was launched by His Royal Highness the Prince of Wales. The project seeks to identify and develop a range of practical mechanisms to value the world's rainforests and provide incentives and encourage commitment by necessary parties to reduce tropical deforestation. Reducing deforestation is likely to be one of the quickest and most cost effective means of reducing CO₂ emissions. This project brings together private-sector, government and environmental experts to develop practical solutions to reduce deforestation and raise global awareness of the true value of tropical rainforests.

Initiative for Global Environmental Leadership (IGEL)

The Center is one of the founding corporate members of IGEL, which has recently been launched by the University of Pennsylvania ("Penn") and The Wharton School ("Wharton"). IGEL is intended to provide a forum for discussion and research of environmental issues that are of importance to the business community and to leverage expertise at Wharton and other Schools at Penn including Law, Design, Engineering, Medicine, and Arts and Sciences, along with a network of leading experts in fields around the world. It will also provide and promote tools for effective corporate communication, management education and strategic planning related to these issues. In keeping with the international scope of this challenge, IGEL intends to create a broad network of educational institutions, businesses, and nonprofit organizations, such as the Paris Institute of Technology and Tsinghua University, to further its efforts.

Resources for the Future

With the release of the report on U.S. Climate Policy Options, the Center has agreed to further support RFF's Climate and Technology Policy Program on a new initiative that focuses on analyzing and developing an international framework as it relates to global climate change. The 15-month project will provide design options and a thorough analysis of the economic and environmental implications of various approaches.

Conferences

In 2007, the Center held three conferences, which were attended by several hundred of our clients in the United States and in Europe:

Energy, Environment and the Financial Markets: The Global Opportunity (London, March 2007)

The Center for Environmental Markets and the Global Markets Institute (GMI) at Goldman Sachs hosted this event in March 2007, bringing together European policy makers, corporate representatives, investors and pioneering alternative energy companies from Europe and North America. Speakers and panelists explored challenges and directions in emissions trading, global energy security and alternative energy markets.

The Business of Climate Change: Risks and Opportunities (New York, April 2007)

In April 2007, the Center brought together Goldman Sachs clients from the corporate, private equity, hedge fund and institutional investor communities for a half-day conference to examine the risks and opportunities that climate change presents to companies and investors.

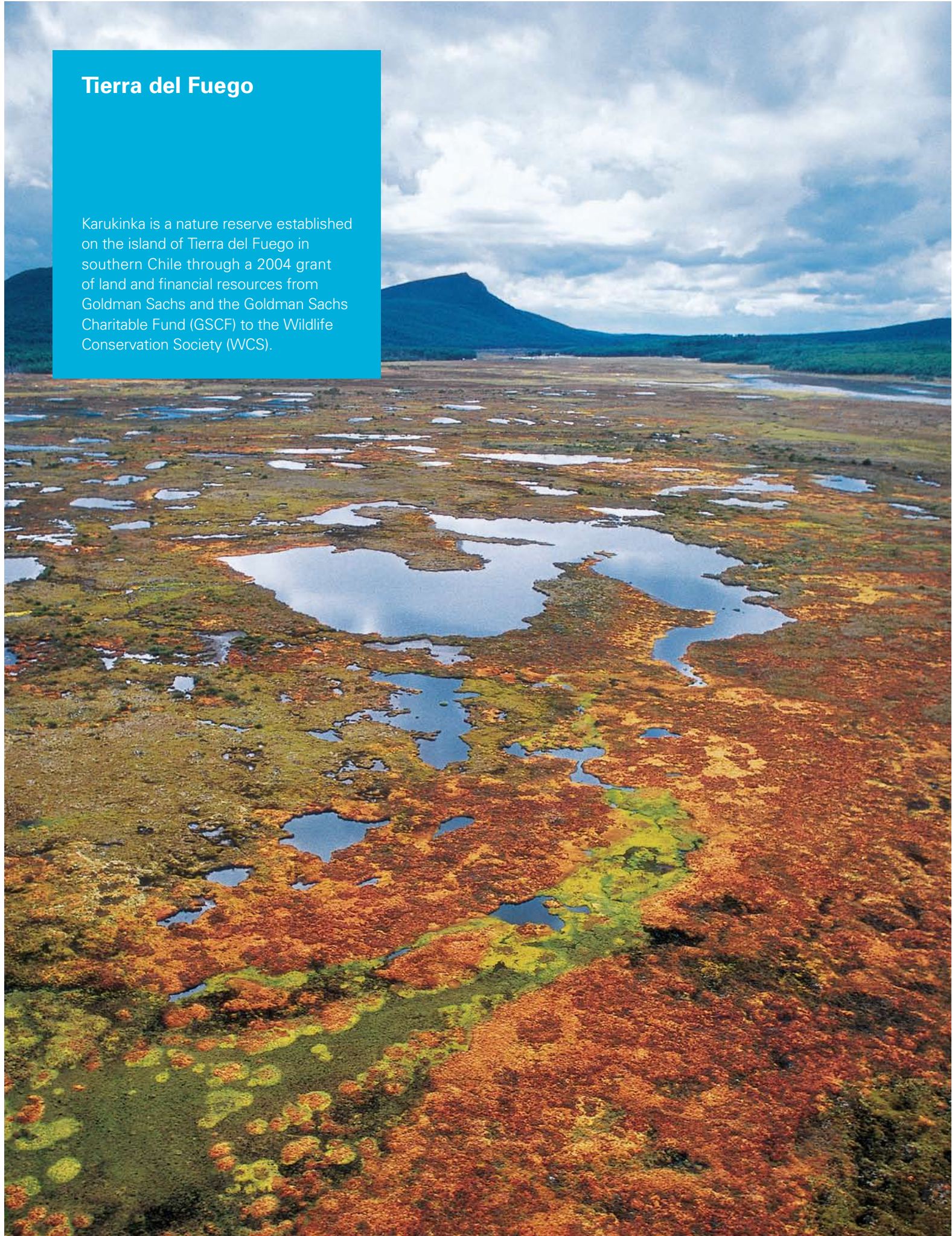
Alternative Energy: Global Public Policy & Regulatory Challenges (Washington, D.C., October 2007)

In October 2007, GMI and the Center for Environmental Markets convened an Alternative Energy Symposium in the Senate Committee on Finance Hearing Room in Washington, D.C. The symposium included industry specialists and policy makers in two panel discussions, highlighting best practices in incentives and regulations outside the United States, as well as competitiveness issues in the alternative energy industry.

We received positive feedback from our clients on these events in 2007 and plan to hold additional conferences and seminars to continue this dialogue worldwide.

Tierra del Fuego

Karukinka is a nature reserve established on the island of Tierra del Fuego in southern Chile through a 2004 grant of land and financial resources from Goldman Sachs and the Goldman Sachs Charitable Fund (GSCF) to the Wildlife Conservation Society (WCS).



Since 2004, Goldman Sachs, Goldman Sachs Charitable Fund (GSCF) and Wildlife Conservation Society (WCS) have worked in partnership to promote conservation of [Tierra del Fuego](#) for the benefit of the people of Chile and to ultimately inspire comparable acts of environmental stewardship and sustainable development around the world.

In August 2007, the Karukinka park expanded from its original 680,000 acres (or 1,062 square miles) to more than 735,000 acres through a transaction with the Onamonte Community, which provided WCS with title to a tract of land joining the two separate parcels of the original reserve, thereby allowing for more effective management and helping to assure the ecological viability of species endemic to the region. At the same time, Goldman Sachs, GSCF and WCS renewed their original three-year alliance for another three years, through 2010, ensuring the continuing strength of the Goldman Sachs/WCS public-private conservation model in Karukinka.

Key achievements to date on the conservation program include the following:

Park Management

WCS has established a permanent staff of park rangers to protect key areas in Karukinka; prevent direct threats to wild, aquatic and terrestrial life in the reserve; and to help implement economic activities of limited ecological impact that will benefit the local community.

Control of Invasive Species

One of the conservation goals for the nature reserve is to restore the ecosystems on Tierra del Fuego and in Patagonia to their natural state by reducing or eliminating invasive species that may directly threaten wildlife. To date, WCS has started large-scale experiments to evaluate the effect of beaver control on ecosystem recovery; coordinated control activities among bi-national, trans-Andean public organizations; and consulted with a gathering of international experts on eradication of invasive animals.

Research and Monitoring

WCS' work in Karukinka is also intended to further the understanding of the systems that it aims to protect, such as Nothofagus forests, threatened or endangered species, and vital ecological processes. WCS is developing, monitoring and assessing a range of intervening actions to address major threats. Examples include research on guanaco ecology and migratory processes and establishing large-scale experiments to evaluate native ecosystem control and recovery methods. In addition, a Karukinka Grant program has been established to fund the work of young scientists developing their thesis projects on conservation in the Magallanes Region, which includes Tierra del Fuego.

Sustainable Development

Karukinka's unique biodiversity will generate value for local communities by providing sustainable economic opportunities to benefit the Magallanes Region that are based on public access and the promotion of professional collaborations for conservation. Karukinka will also promote the development of conservation education on Tierra del Fuego. Both of these initiatives will be governed by the recently completed Karukinka Public Use Plan, which emphasizes conservation research, education and tourism. Additional achievements to date include assisting in the development of a conservation science training program for teachers, supporting other local environmental education activities, and opening hiking trails and a lodge for visitors.

Conclusion

Two years after the release of the Goldman Sachs Environmental Policy Framework, we continue to intensify our efforts to promote and implement more responsible environmental practices both inside and outside the firm.

In 2007, we achieved important milestones on many fronts through the enthusiastic and disciplined contributions of thousands of Goldman Sachs employees. As we experience changes in our global businesses, operations, and energy and technology demands, we remain focused on practical, substantive steps to reduce our direct environmental impact, continue our public engagement to explore responsible policies and best practices among industry leaders and organizations, and advance the development of innovative technologies and market-based solutions addressing climate change and broader environmental issues.

The demonstrated need for these initiatives in an organization as resourceful as ours illustrates the dimensions of the environmental challenges facing companies and societies all over the world. It also reinforces our commitment to bring forth our people, capital and ideas to this broad and long-term challenge, in the interests of our clients, shareholders, employees, neighbors and all who participate in our global economy and enjoy the benefits of this planet.

Appendix A

Global Investment Research Client Reports

GS SUSTAIN

- Global Research: Introducing GS SUSTAIN (June 22, 2007)
- Global Insurance added to GS SUSTAIN (September 28, 2007)
- Global Pharmaceuticals at a turning point: Innovate or restructure (May 29, 2007)
- Global Food & Beverages brands expand into healthy products and emerging markets (February 8, 2007)
- Global Energy under pressure to find and develop new growth projects (October 9, 2006)
- Global Mining & Steel respond to steep change in demand for metals and minerals (July 18, 2006)
- European Media in a race to keep up with dynamic change (February 21, 2006)

Global Alternative Energy Research

- Europe: Energy: Alternative Energy: Wind is key to Europe's push for Renewables (October 31, 2007)
- China: Energy: Alternative Energy: Solar Power: Forget the noise and focus on LT winners (October 19, 2007)
- Europe: Energy: Alternative Energy: Wind is key in Europe's push for renewables; initiating on five companies (September 7, 2007)
- Europe: Energy: Alternative Energy: We remain cautious on Biofuel Processors (August 30, 2007)
- Europe: Energy: Alternative Energy: Caution on the upstream (August 30, 2007)
- Taiwan: Technology: Taiwan solar initiation: Competition in a new landscape (August 19, 2007)
- Europe: Energy: Alternative Energy: Initiating on two solar equipment makers (July 24, 2007)

- Global: Energy: Alternative Energy: Initiating on three solar companies (April 24, 2007)
- Europe: Utilities: The green option: Renewing growth (July 9, 2007)
- Americas: Energy: Alternative Energy: Initiating on Alternative Energy: Searching for renewable profits (October 23, 2006)
- Europe: Energy: Alternative Energy: European Renewable Energy—sun, wind and grain (October 16, 2006)

Global Economic Research

- *Global Economics Weekly*: 07/27— Insuring the Planet (July 18, 2007)
- *Global Economics Weekly*: 07/26— Japan and Brazil: Role Models for Energy Efficiency? (July 11, 2007)
- *Washington Viewpoint*, Issue No. 07/04: Energy Carbonomics: Carbon Regulations Inevitable in the U.S. (May 15, 2007)
- *BRICs Monthly*: 07/05— Women Hold Up Half the Sky (May 15, 2007)
- *Global Economics Paper*: 154— Gender Inequality, Growth and Global Aging (April 3, 2007)
- *European Weekly Analyst*: 07/07— Europe's Green Comparative Advantage (February 22, 2007)
- *BRICs Monthly*: 07/02— Why the BRICs Dream Should Be Green (February 13, 2007)
- *Global Economics Weekly*: 07/05— Things Are Heating Up: Economic Issues and Opportunities From Global Warming (February 7, 2007)
- *U.S. Economics Analyst*: 07/04— Climate Policy: A Big Shift After 2008 (January 26, 2007)

Appendix B

Baseline Methodology

In developing its baseline projection for emissions, the firm created an online utility tracking database to record global facility utility information. This database helps the firm track carbon emissions and utility consumption. Global data is collected monthly in local units and normalized into U.S. units.

Carbon emissions factors from various utility sources were used to calculate CO₂ emissions. Electric emissions factors for the United States were taken from the eGRID Subregion Emission Factors year 2000 as the most up-to-date published electric emissions factor in Pounds CO₂ per Kilowatt-Hour (lbs CO₂/kWh). Electric emissions factors for EMEA and Asia were taken from the International Energy Agency (IEA) Electricity Emission Factors for all fuels year 2004 as the most up-to-date published electric emissions factor in Pounds CO₂ per Kilowatt-Hour (lbs CO₂/kWh). Global gas, oil and steam emissions factors were recommended by our environmental consultant, Viridian Energy & Environmental, LLC (formerly a division of Steven Winter Associates). Updated emissions factors are published by the above mentioned agencies, and will be applied accordingly to future emissions calculations.

Estimated emissions were derived by multiplying rentable square feet by a standard emissions per square foot factor based on performance of similar facility types.

Changes to Reporting Methodology

We also implemented three changes to our reporting methodology from the 2006 Year-End Report to more effectively measure efficiency gains and benchmark other office facilities:

1. We adjusted our square foot calculation from occupied square feet to rentable square feet, as reflected in the adjustment to our baseline.
2. We began reporting emissions per full-time employee (FTE) excluding data centers, in addition to emissions per FTE overall.
3. We began reporting emissions per dollar net revenue.

Outside Consultation

Goldman Sachs has consulted with World Resources Institute (WRI) and the U.S. Department of Energy (DOE) to develop a consistent and transparent global reporting strategy.

We will report annually on our performance targets, energy consumption, emissions reduction and further measures we are taking to meet our goals.

Cogentrix

Total CO₂ emissions are expressed as “total power generation”, and hence does not include all sources of CO₂ such as space heating, SO₂ control, etc. Our reporting methodology mirrors the protocol used in California which takes into account steam generation for other uses and the double work steam does in cogeneration. More specifically:

- Emissions per MWh (tons/net MWh) takes into account power generated.
- Emissions per MWh (tons/net + steam MWh) takes into account additional steam generation and use.
- The Steam Production Emissions Allocation equation calculates a MWh equivalent for the steam exported, which is then used in the tons per net + steam MWh calculation.
- The last two lines in the summary table take into account Cogentrix’s percent ownership interest in each site.
- CO₂ emission factors from the California protocol for bituminous coal, oil, and natural gas are used except for waste coal (Scrubgrass and Northampton), TDF (Richmond), and fiber rejects (Cedar Bay), where the emission factors are adjusted to the carbon in the fuel.

Appendix C

Additional Responsible Products and Programs

Document Management

- Introduced FSC-certified copy paper in Hong Kong.
- Increased the number of green stationery items, such as notebooks and file dividers, offered in our stationery program in London.
- All “end-of-life” fleet equipment is redeployed or recycled.

Hospitality

- In addition to London and New York, pantry programs in Chicago and Hong Kong now feature Rainforest Alliance™ certified coffee.
- Converted to biodegradable bamboo cutlery and cups and napkins made with recycled content in our Hong Kong pantry program.
- Introduced reusable carryall bags in our New York cafes.

Recycling

- Launched inaugural recycling programs in Bangalore, Hong Kong, Mumbai, Seoul and Singapore that include the recycling of paper, aluminum, glass and household batteries.
- Launched an enhanced recycling program in London. Paper, cardboard, plastic, glass, batteries, metals, mobile phones and toner cartridges are all recycled. In addition, waste materials for recycling are now collected in one single collection by one vehicle, thereby minimizing vehicle movements.
- Glass products have been eliminated from most lines of business in New York in an effort to enhance recycling participation.
- In Bangalore, Hong Kong, London, Mumbai, New York, Seoul and Tokyo, all of our office furniture is reused or recycled.

Travel

- 100 percent of the London car service runs on Euro 4 clean diesel. The entire London taxi fleet will be a minimum of Euro 3 compliant by summer of 2008 in line with the Mayor of London’s cleaner city policy.
- In India, we have tested vehicles capable of operating on 100 percent bio-diesel.
- Added two LEED-certified hotels to our hotel program.
- Participated in American Express’ Eco Reporting Pilot.
- Furthered our efforts to promote paperless travel by achieving a conversion rate from paper to electronic ticketing of 30 percent for flight and travel confirmations in Asia.