



# CORPORATE GOVERNANCE AND CLIMATE CHANGE

## CONSUMER AND TECHNOLOGY COMPANIES

December 2008

*A Ceres Report*



**Ceres**



RiskMetrics Group

*Authored by RiskMetrics Group*

Doug Cogan  
Megan Good  
Geri Kantor  
Emily McAteer

Ceres commissioned this report from RiskMetrics Group.

Ceres is a national coalition of investors, environmental groups and other public interest organizations working with companies to address sustainability challenges such as global climate change. Ceres directs the Investor Network on Climate Risk, a group of more than 70 institutional investors from the US and Europe managing over \$7 trillion in assets.

RiskMetrics Group is a leader in the disciplines of risk management, corporate governance and financial research & analysis. It analyzes a broad spectrum of risk for financial institutions and corporations worldwide.

RiskMetrics Group wrote and prepared this report for informational purposes. Although RiskMetrics exercised due care in compiling the information contained herein, it makes no warranty, express or implied, as to the accuracy, completeness or usefulness of the information, nor does it assume, and expressly disclaims, any liability arising out of the use of this information by any party. The views expressed in this report are those of the authors and do not constitute an endorsement by RiskMetrics Group. Changing circumstances may cause this information to be obsolete.

This report was made possible through grants from the Rockefeller Brothers Fund, the Energy Foundation, the Nathan Cummings Foundation, the Blue Moon Fund, the Richard and Rhoda Goldman Foundation, and the Marisla Foundation.

The opinions expressed in this report are those of the author and do not necessarily reflect the views of the sponsors.

The authors wish to thank the Carbon Disclosure Project for providing company responses to its sixth annual questionnaire, which offered vital information to complete the report's individual company profiles.

Jim Coburn, Peyton Fleming, Anne Kelly, Mindy Lubber, Andrea Moffat and Meg Wilcox of Ceres also provided valuable insights and editing suggestions.

Ceres wishes to thank the Investor Network on Climate Risk (INCR) members who helped develop this report, and additional members of the Ceres team who edited the report: Amanda Howard, Matt Moscardi, Kristen Parkinson and Brian Sant. Maggie Powell of Maggie Powell Designs, Inc. produced the final report.

Copyright 2008 by Ceres

Copyrighted RiskMetrics Group material used with permission by Ceres

Ceres, Inc.  
99 Chauncy Street  
Boston, MA 02111  
[www.ceres.org](http://www.ceres.org)

RiskMetrics Group Inc.  
One Chase Manhattan Plaza  
44th Floor  
New York, NY 10015  
[www.riskmetrics.com](http://www.riskmetrics.com)

# Table of Contents

---

Foreword by Mindy Lubber, President, Ceres.....	3
I. Executive Summary .....	5
II. Key Findings	
Climate Governance.....	16
Operations.....	24
Product Design and Promotion .....	37
Supply Chain Management.....	41

## Appendices

Company Profile Key .....	46
Sample Company Profile.....	48

*Individual company profiles can be accessed online at: [www.ceres.org/publications](http://www.ceres.org/publications)*

## Exhibits

1. Sector breakdown of companies.....	8
2. Regional breakdown of companies.....	8
3. Average scores and ranges by sector .....	12
4. Key performance indicators of climate change governance .....	17
5. McKinsey Global Survey: climate change responsibility .....	18
6. Securities filings disclosure.....	20
7. Company GHG emissions and energy use reduction targets .....	24
8. Absolute emissions reduction targets .....	27
9. Water risks for key sectors .....	29
10. Beverage producers' water use.....	29
11. Energy cost comparison: Energy Star-labeled v. typical building.....	31
12. Companies developing climate-related products and services .....	38
13. Carbon footprinting: Tesco laundry detergent.....	40
14. Supply chain GHG emissions: Carrefour's Chambourcy hypermarket.....	41

# Acronyms

---

BOMA – Building Operators and Managers Association	IPCC – Intergovernmental Panel on Climate Change
BREEAM – Building Research Establishment Environmental Assessment Method	IPO – Initial Public Offering
CaCX – California Climate Exchange	ISO – International Standards Organization
CCX – Chicago Climate Exchange	JI – Joint Implementation
CDM – Clean Development Mechanism	KW – Kilowatt
CDP – Carbon Disclosure Project	KWh – Kilowatt hour
CER – Certified Emission Reduction	LEED – Leadership in Energy and Environmental Design
CHP – Combined Heat and Power	MDG – Millennium Development Goals
CO <sub>2</sub> – Carbon Dioxide	MTCE – Metric Tons Carbon Equivalent
CO <sub>2</sub> e – Carbon Dioxide Equivalent	MW – Megawatt
CR – Corporate Responsibility	MWh – Megawatt hour
CSR – Corporate Social Responsibility	NASA – National Aeronautics and Space Administration
ECX – European Climate Exchange	NGO – Non-Governmental Organization
EHS – Environment, Health & Safety	PPM – Parts Per Million
EMS – Environmental Management System	REC – Renewable Energy Certificate
EPA – Environmental Protection Agency	SME – Small & Medium Enterprise
ESCO – Energy Service Company	SRI – Socially Responsible Investment
ESG – Environmental, Social and Governance	UNEP – United Nations Environment Programme
EUA – EU Emission Allowance	UNFCCC – United Nations Framework Convention on Climate Change
EU ETS – European Union Emissions Trading Scheme	USCAP – United States Climate Action Partnership
FTE – Full Time Equivalent	USGBC – United States Green Building Council
GHG – Greenhouse Gas	VER – Verified Emission Reduction
GRI – Global Reporting Initiative	WBCSD – World Business Council on Sustainable Development
HVAC – Heating, Ventilation & Air Conditioning	WRI – World Resources Institute
ICT – Information and Communication Technology	
IETA – International Emissions Trading Association	

# Foreword

---

Consumer and technology companies are already feeling powerful ripples from climate change. Their massive operations and supply chains will be tested by global warming regulations that make fossil fuels more expensive — and clean energy, energy efficiency, and renewable energy much more attractive. These companies also face a rising consumer demand for climate-friendly products, bringing enormous opportunities in the products they make, goods they put on store shelves and labels they use to inform customer choices.

The changing economic and political landscape should also make climate change a top priority for these companies. Consider:

- Energy prices are gyrating up and down, making energy savings a vital hedge against future operating costs;
- The sub-prime mortgage meltdown has catalyzed much-needed attention to corporate risk management practices, including hidden costs of climate change that are just now rising to the surface;
- President-elect Barack Obama is vowing to curb greenhouse gas (GHG) emissions and make clean energy a driver of future job creation and economic growth;
- Physical evidence is stronger than ever that human-induced global warming is profoundly altering our global environment and moving it toward a dangerous tipping point.

It's no wonder Wall Street is paying close attention to companies that are distinguishing themselves compared to their peers on these diverse and overlapping challenges.

“We expect the importance of climate change performance to rise further and extend to an increasing number of sectors,” said Goldman Sachs, in a study issued in October. “Asking which sectors are most exposed is a far less relevant question than asking which companies are most effectively positioning themselves to establish competitive advantage relative to peers in each industry. No sector is immune from the implications of rising social awareness of climate change.”

This Ceres report is the first comprehensive assessment of how 63 of the world's largest consumer and information technology companies are preparing themselves to face this colossal challenge. The report includes 11 industry sectors — Apparel, Beverages, Big Box Retailers, Grocery & Drug Retailers, Personal & Household Goods, Pharmaceuticals, Real Estate, Restaurants, Semiconductors, Technology and Travel & Leisure.

The report pays particular attention to how corporate executives and board directors are addressing their governance systems to minimize climate-related risks and maximize solution-oriented products and services that will help society mitigate and adapt to climate change.

The report employs a “Climate Change Governance Framework” to evaluate how 48 US companies and 15 non-US companies are addressing climate change through board oversight, management execution, public disclosure, GHG emissions accounting and strategic planning and performance.

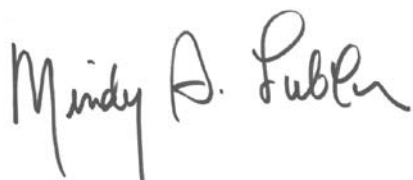
The results provide some basis for encouragement, with selected companies across all sectors beginning to address climate change in their operations, product development and supply chain management. Yet for all of the positive momentum, many companies have done little so far to elevate climate change as a governance priority — a trend that cuts across European, North American and Asian companies alike. For example, only 15 of the 63 companies have tasked board-level committees with environmental oversight, and only seven of the CEOs of these firms have taken leadership roles

on environment and climate change initiatives. More revealing, none of the companies have explicitly linked CEO or other C-level executive compensation to climate change goals.

While many of these companies are making progress, their actions to date are only the beginning of what is needed from these sectors to reduce GHG emissions consistent with targets scientists say are needed to avoid permanent damage to the climate. In this regard, more companies should:

- elevate climate change as a governance priority for board members and CEOs
- link the company's largest compensation packages – those of the CEO and other senior executives – to GHG reduction targets and other climate performance measures
- set company-wide energy efficiency goals and mandate energy efficiency evaluations for all major capital investments
- boost attention to supply chain management by including supply chain GHG emissions – emissions that result from raw material extraction, production, transport and packaging – in emissions inventories and setting emission standards for suppliers
- set renewable energy purchase targets
- expand programs to educate, empower and reward employees for their climate-specific initiatives.

As powerful market drivers that reach virtually every buyer and business, consumer and technology companies must be central players in mitigating climate change and its impacts. These companies have the reach, influence and capabilities to achieve even bigger changes that will help solve the climate crisis.

A handwritten signature in black ink that reads "Mindy A. Lubber". The signature is written in a cursive, flowing style.

Mindy S. Lubber  
President, Ceres  
Director, Investor Network on Climate Risk



# Executive Summary

Volatile energy prices and growing environmental concerns have catapulted climate change to the top of corporate agendas of many industries. Until now, attention has focused on emissions-intensive industries, such as power generation and oil production. Yet climate change is a critical issue for all sectors of the economy. Climate-related business strategies are gaining ground more quickly due to unpredictable commodity markets, the current financial crisis and the arrival of a President-elect in the United States who intends to put clean energy and greenhouse gas (GHG) emissions controls on a fast track. At the same time, physical evidence is growing stronger that climate change is altering the global environment and that changes in consumer behavior must begin now to avoid bringing the climate to a dangerous tipping point.

## New Sectors in the Spotlight

Given this rapidly changing landscape, it is particularly important to identify which companies are making climate change a transformational issue for their business – *across all industry sectors*. This report examines the corporate governance and strategic approaches to climate change of 63 of the world's largest consumer products and information technology companies in 11 industry sectors – apparel, beverages, big box retailers, grocery & drug retailers, personal & household goods, pharmaceuticals, real estate, restaurants, semiconductors, technology and travel & leisure.

While these companies represent a diverse group of industries – all with unique challenges in addressing climate impacts – they also share several important common characteristics. On the **operational** side, with manufacturing sites and vast real estate portfolios around the world, these companies are major energy consumers. Against this backdrop, energy conservation and efficiency measures are a first line of defense against rising energy costs and growing GHG emissions. At Wal-Mart, direct and indirect emissions from its massive global operations exceed 20 million tons a year – equivalent to a mid-sized power company.

These companies are also makers of leading brands that must build reputation and trust with their customers by demonstrating environmental commitment and by capturing growing opportunities to provide climate-friendly **products and services**. Tesco, for example, is already putting carbon footprint labels on many of its products and has quadrupled sales of energy efficient light bulbs in the past year. While the vast majority of consumers are still just beginning to change their buying patterns, emerging demand for product alternatives is transforming the marketplace and enhancing the role of companies with compelling “green” credentials. This trend extends beyond grocery stores and big box retailers to more unlikely industries, such as apparel and hotels, as well as technology companies that have made innovative product design a priority in introducing more energy-efficient computers and data centers.

Finally, for many companies the focus is on the large portion of their carbon footprints found in their **supply chains**. A case in point is Nike, whose extensive chain of footwear manufacturing sites accounts for 60 percent of its total carbon footprint. Because GHG emissions from raw materials, component suppliers and transportation of goods are difficult to measure and control, these companies cannot face the climate challenge alone; they must collaborate with one another and with suppliers. As one example, Coca-Cola and Molson Coors are implementing a common industry standard to measure product lifecycle emissions. Dell, Wal-Mart and several other companies are engaging directly with suppliers in China to ensure that GHG emissions are assessed and reported.

Ultimately, investors are looking to identify which companies have the best management systems in place to address climate risks before they become liabilities and which companies are finding

*Investors are looking to identify which companies have the best management systems in place to address climate risks before they become liabilities.*

competitive advantage by pursuing strategic opportunities in operational efficiencies, product development and supply chain management. While progress is being made – through green building construction and retrofits, deployment of smart technologies, innovative product design, better supplier engagement and logistical planning – the scale of climate change and its potential future costs cannot be ignored. The challenges ahead require much faster and more comprehensive responses from all sectors of the economy.

## Key Findings

The 63 companies examined in this report all face climate- and energy-related challenges through their operations, products and supply chains. While all of the companies could do more to improve their governance responses, important progress is being made. Given the wide range of challenges and opportunities facing these 11 sectors, it is not surprising that their performance also varies (see the next section *How Companies were Scored* for details on how companies were evaluated). Among the report highlights:

- The **technology, pharmaceutical** and **semiconductor** sectors had the highest average climate governance scores (59, 57 and 56 points, respectively, out of 100 total possible points). While technology and semiconductor companies had particularly strong performance in product and service innovation, pharmaceutical firms also scored surprisingly well due to their strong governance structures.
- The **beverages** and **personal & household goods** sectors were relatively strong performers (averaging 43 and 40 points, respectively), which is noteworthy given their limited scope to adapt their products to address climate change opportunities. Nevertheless, leaders in the personal & household goods sector are beginning to introduce more green products, and the beverages sector is also starting to adjust its operations as climate risks to water and agricultural raw materials come to light.
- The **apparel** sector, **grocery & drug retailers** and **big box retailers** – all of which have large real estate carbon footprints – had lower average scoring results (35, 35 and 33 points, respectively). These sectors have yet to take full advantage of significant opportunities to maximize energy efficiency in their operations, market climate-friendly products and engage suppliers on emerging climate change standards. Still, each of these sectors includes at least one or two high-performing companies that stand out with regard to energy efficiency, product promotion and supply chain management.
- The **travel & leisure, real estate** and **restaurant sectors** (averaging 27, 27 and 17 points, respectively) had the lowest average scores among the sectors reviewed. This finding is particularly surprising, given that hotels, cruise lines, restaurants and property managers have extensive real estate portfolios that could be taking advantage of more energy efficient opportunities. These companies could also be making more concerted consumer appeals about their green strategies and climate mitigation efforts. Real estate developers and property managers, in particular, need to examine the environmental impact of their buildings, which account indirectly for upwards of 40 percent of US GHG emissions. It is also worth noting that while some companies in each of these sectors are pursuing green building initiatives, they are often doing so for only select or flagship properties, rather than throughout their full portfolios, where even greater savings could be attained. These companies also had generally weak governance structures, management leadership and public disclosure on climate-related issues.



### Governance Leaders

Coca-Cola  
Dell  
Ecolab  
IBM  
Intel  
Johnson & Johnson  
Nike  
Tesco

**Climate Change Governance:** Corporate governance is critically important in determining how companies are responding to climate change. Companies that integrate climate change into their board and executive structures, as well as their public reporting mechanisms, are far more likely to maintain the long-term commitment and comprehensive approaches needed to effectively address climate change risks and opportunities across their entire business structure.

- Only 15 of the 63 companies examined in this report have tasked board-level committees with environmental oversight, and only 11 companies specifically state that their board receives climate-specific updates from management.
- Only seven of the CEOs among the 63 firms reviewed have taken leadership roles on environment and climate change initiatives.
- None of these companies has taken the added step of linking C-suite executive compensation directly to progress on climate change initiatives.
- However, climate change issues are increasingly becoming a part of corporate annual reporting; two-thirds of the companies evaluated mention climate change in their annual report to shareholders. Sixteen companies also discuss climate change in their most recent securities filings.
- More than 60 percent of the companies evaluated have conducted a GHG emissions inventory. This is an essential step in developing strategies and evaluating progress in controlling GHG emissions in a company's operations, products and supply chain.

### Operations Leaders

Coca-Cola  
Dell  
IBM  
Johnson & Johnson  
Marriott International  
Sun Microsystems  
Tesco  
Wal-Mart

**Operations:** Energy efficiency is critical to a successful emissions reduction strategy, especially for the high energy-consuming companies evaluated in this report. For most companies this begins with their operations, where they have full control and can reap the benefits of reduced energy bills and lower operating costs.

- All but three companies reviewed have addressed their energy consumption practices in some way through building design or retrofits, process energy efficiency, equipment upgrades, facilities management and employee incentives.
- Yet only a half-dozen companies have prioritized capital allocation for energy efficiency projects by establishing dedicated funds, relaxing the normal requirements for return on investment or mandating an energy efficiency evaluation for projects above a certain cost threshold.

### Products & Services Leaders

Applied Materials  
IBM  
Intel  
Tesco  
Wal-Mart

**Products and Services:** Climate-related product strategies vary by sector, although 30 percent of the companies reviewed, including at least one company in every sector, have identified climate change-related commercial opportunities for their products or services.

- Companies in the **technology** and **semiconductor** sectors have been the most active in the area of energy efficient product design, while a few **big box and grocery retailers** have assumed a lead role in energy efficient or climate friendly product promotion and sales.
- Two companies in the **pharmaceutical** sector are addressing the unique challenge of reducing non-carbon dioxide GHG emissions in their health care products. The emissions from consumer use of these pharmaceutical products account for a considerable portion of their GHG footprint, up to two-thirds of one firm's estimated total emissions. **Semiconductor** manufacturers and **beverage makers** are also addressing the challenge of reducing other greenhouse gases, such as hydrofluorocarbons and chlorofluorocarbons that are significantly more potent GHGs than CO<sub>2</sub>, from their operations.

**Supply Chain:** For many large companies, GHG emissions embedded upstream in their supply chains account for the largest portion of their total carbon footprint. As investors and consumers increasingly look to evaluate companies' full life-cycle carbon exposures, supply chain reporting and management is becoming increasingly relevant for evaluation purposes.

- Only three companies in this report have included supply chain GHG emissions – emissions that result from raw material extraction, modification, transport, storage and packaging—in their emissions inventories. Ten others report that are beginning to measure the GHG emissions associated with their supply chain.
- Many more companies are taking some action to minimize their supply chain emissions, however. Approximately one-third are boosting their engagement with key suppliers, improving logistics or switching to alternate forms of transport. Some are also using life-cycle analyses to establish controls on supply chain GHG emissions.

Supply Chain Leaders
Carrefour
Dell
Hennes & Mauritz (H&M)
Hewlett-Packard
IBM
Molson Coors
Nike
Tesco
Wal-Mart

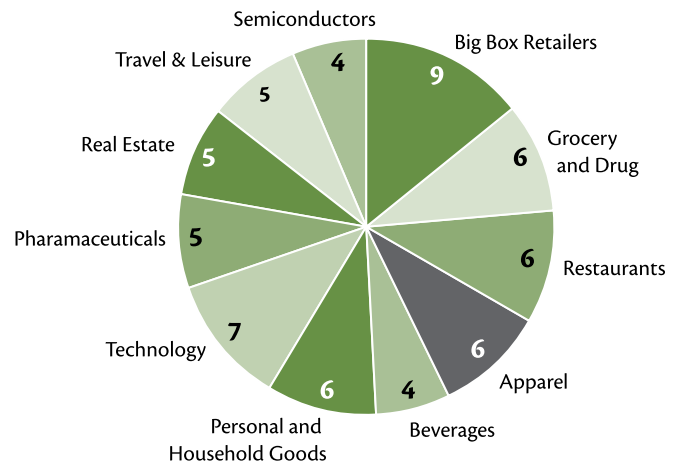
Overall, this report finds that consumer and technology companies are beginning to address climate risks more proactively, reduce operational emissions and seize new product and service opportunities. The leaders across all sectors are thinking creatively about how to transform their business models to meet changing customer preferences. However, much more needs to be done to strengthen governance of climate change issues, set and meet aggressive emission reduction targets and measure full supply chain GHG emissions to address the realities of a carbon-constrained world.

### How Companies Were Selected

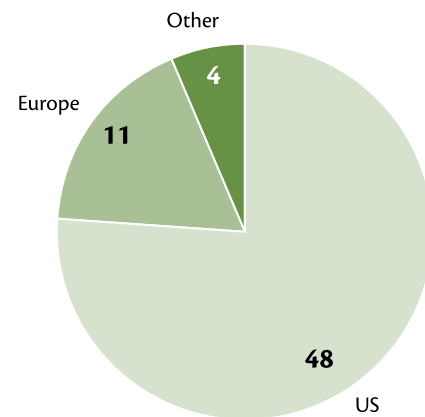
The sectors reviewed in this report were selected to highlight the climate change risks and opportunities facing firms that are relatively large energy and electricity consumers but are not likely to be directly regulated by most climate change legislation aimed at direct GHG emitters. At the same time, these leading brands are also under pressure to relate to customers and suppliers who are becoming increasingly conscious of climate change and energy concerns.

The 63 companies in this report are categorized into 11 sectors: **apparel, beverages, big box retailers, grocery & drug retailers, personal & household goods, pharmaceuticals, real estate, restaurants, semiconductors, technology and travel & leisure.** Within each sector, companies were selected based on market capitalization (as of May 2008) and annual revenue. Most sectors are represented by either five or six companies; however, big box retailers (nine companies) and technology (seven companies) were expanded to include major brand names that may be of particular interest to investors as well as consumers.

To analyze these companies, information was gathered and reviewed from securities filings, corporate reports, corporate websites, media accounts and third-party questionnaires, including the Carbon Disclosure Project. Each of the 63 companies was given the opportunity to comment on the draft profiles and 48 companies offered comments.



**Exhibit 1: Sector Breakdown of Companies**



**Exhibit 2: Regional Breakdown of Companies**

## How Companies Were Scored

RiskMetrics Group, in consultation with Ceres and the Investor Network on Climate Risk (INCR), developed the Climate Change Governance Framework in 2003 to analyze corporate responses to climate change. Three previous reports written by RiskMetrics for Ceres and INCR used the Framework as a guideline in scoring companies: *Corporate Governance and Climate Change: Making the Connection* (published in 2003 and updated in 2006) and *Corporate Governance and Climate Change: The Banking Sector* (published in January 2008).

The Framework uses five main areas to evaluate corporate climate change strategies: **board of director oversight; management execution; public disclosure; emissions accounting; and strategic planning and performance.** Within each of these areas, many sub-factors are evaluated to produce a final, scored assessment of corporate responses to address climate change.

The Climate Change Governance Framework is designed to be flexible so it can be applied to a broad range of industries. It can be adapted in terms of weightings and specific areas of analysis to reflect the particular circumstances of an industry. Regardless of industry sector, geographic location or size, the Framework assumes that all companies have an opportunity to manage climate impact through good governance.

Ceres/RiskMetrics Climate Change Governance Framework		
Board Oversight		Weight
1	Board has explicit oversight responsibility for environmental affairs/climate change.	12%
2	Board conducts periodic review of climate change and monitors progress in implementing strategies.	
Management Execution		
3	Chairman/CEO clearly articulates company's views on climate change and GHG control measures.	20%
4	Executive officers are in key positions to monitor climate change and manage response strategies.	
5	Executive officers' compensation is linked to attainment of environmental goals and GHG targets.	
Public Disclosure		
6	Securities filings and/or MD&A identify material risks, opportunities posed by climate change.	14%
7	Public communications offer comprehensive, transparent presentation of response measures.	
Emissions Accounting		
8	Company conducts annual inventory of direct and indirect GHG emissions and publicly reports results.	16%
9	Company has set an emissions baseline by which to gauge future GHG emissions trends.	
10	Company has third party verification process for GHG emissions data.	
Strategic Planning & Performance*		
11	Company sets aggressive absolute GHG emission reduction targets for facilities, energy use, business travel, and other operations, and achieves these targets on schedule.	38%
12	Company has implemented company-wide programs to improve the energy efficiency of its operations.	
13	Company currently purchases renewable energy for a significant portion of its energy use and has set targets to increase future renewable energy purchases.	
14	Company pursues strategies to maximize opportunities from product and service offerings related to climate change.	
15	Company has assessed supply chain GHG emissions, engaged with suppliers on controlling emissions, addressed climate impacts of materials/packaging and improved logistics to reduce emissions.	

\* Indicators adjusted from Climate Change Governance Framework to reflect focus on energy efficiency, renewable energy, products and services, and supply chain management.

Since the 11 sectors reviewed for this report face different challenges and opportunities to mitigate climate change impact, weights were adjusted by industry sector for the final Strategic Planning & Performance section. It is assumed that companies across all sectors can be addressing climate risks equally through board oversight, management execution, public disclosure and emissions accounting. Likewise, within the Strategic Planning & Performance section scores were weighted equally for setting emissions reduction targets and investing in renewable energy. However, the weights for three of the five themes in this section — Energy Efficiency, Products & Services and Supply Chain Management - vary by sector to acknowledge different sector impacts and opportunities.

For instance, **technology, semiconductors** and **real estate** have significant climate impact through end-use of their products. Therefore, Products & Services are emphasized for all three of these sectors (particularly for the real estate sector). In addition, sectors with significant climate impact in their supply chains—such as **big box retailers** and **grocery and drug retailers**—were evaluated with a greater emphasis on Supply Chain Management. Energy Efficiency was weighted more heavily for sectors with large real estate footprints. Due to these variations, comparative analysis of sector peers may be more useful than comparison of companies across different sectors.

To generate a total score, each of the five sections of the overall Climate Change Governance Framework has been assigned a percentage weight. Raw section scores were divided by the number of total possible points for that section to produce a normalized section score, which were then aggregated to generate a final score on a 0 to 100-point scale.

*Checkmarks Indicate Emphasis for Variable Section Scores*

Industry Sector	Key Climate Change Considerations	Energy Efficiency	Products & Services	Supply Chain Management
Apparel	<ul style="list-style-type: none"> <li>• Energy efficiency of stores</li> <li>• Raw material production/sourcing</li> </ul>	✓		✓
Beverages	<ul style="list-style-type: none"> <li>• Energy efficiency of manufacturing</li> <li>• Agricultural disruptions</li> <li>• Water supply and quality</li> </ul>	✓		✓
Big Box Retailers	<ul style="list-style-type: none"> <li>• Energy efficiency of stores</li> <li>• Transport and logistics costs</li> <li>• Carbon labeling of products</li> </ul>	✓	✓	✓
Grocery & Drug Retailers	<ul style="list-style-type: none"> <li>• Energy efficiency of stores</li> <li>• Transport and logistics costs</li> <li>• Carbon labeling of products</li> </ul>	✓	✓	✓
Personal & Household Goods	<ul style="list-style-type: none"> <li>• Energy efficiency of manufacturing</li> <li>• Raw material sourcing</li> <li>• Demand for climate-friendly products</li> </ul>	✓	✓	✓
Pharmaceuticals	<ul style="list-style-type: none"> <li>• Energy efficiency of manufacturing</li> <li>• Product distribution</li> </ul>	✓		✓
Real Estate	<ul style="list-style-type: none"> <li>• Building portfolio energy efficiency</li> </ul>		✓	
Restaurants	<ul style="list-style-type: none"> <li>• Energy efficiency of buildings</li> <li>• Supply chain management</li> </ul>	✓		✓
Semiconductors	<ul style="list-style-type: none"> <li>• PFC emissions in manufacturing</li> <li>• Water supply and quality</li> <li>• Demand for new products – solar cells</li> </ul>	✓	✓	
Technology	<ul style="list-style-type: none"> <li>• Energy efficiency of products</li> <li>• Energy efficiency of manufacturing/offices</li> </ul>	✓	✓	
Travel & Leisure	<ul style="list-style-type: none"> <li>• Energy efficiency of hotels/cruise ships</li> <li>• Supply chain management</li> <li>• Changing customer preferences</li> </ul>	✓		✓

## COMPANY SCORES – OVERALL RANKING

Company	Score	Company	Score
International Business Machines Corp.	79	Simon Property Group, Inc.	38
Tesco plc	78	CB Richard Ellis Group, Inc.	37
Dell Inc.	77	Target Corp.	37
Intel Corp.	72	Best Buy Co., Inc.	36
Johnson & Johnson	71	The Gap Inc.	34
NIKE, Inc.	71	Apple Inc.	28
Wal-Mart Stores, Inc.	69	adidas AG	28
Applied Materials, Inc.	67	Texas Instruments Inc.	28
The Coca-Cola Company	65	Brookfield Asset Management Inc.	27
Sun Microsystems, Inc.	63	Avon Products, Inc.	27
Hewlett-Packard Company	62	Whole Foods Market, Inc.	27
Molson Coors Brewing Company	58	McDonald's Corp.	26
GlaxoSmithKline plc	57	Limited Brands, Inc.	25
Taiwan Semiconductor Mfg. Co. Ltd.	56	The Estee Lauder Companies Inc.	24
Novartis AG	56	The Kroger Co.	23
Cisco Systems, Inc.	55	Walgreen Company	21
Hennes & Mauritz AB (H&M)	54	Starwood Hotels & Resorts Worldwide, Inc.	18
L'Oréal	54	Lowe's Companies, Inc.	17
Marriott International, Inc.	53	General Growth Properties, Inc.	16
Starbucks Corp.	52	Boston Properties, Inc.	16
Carrefour SA	52	The Home Depot, Inc.	15
Colgate-Palmolive Company	52	Costco Wholesale Corp	14
Canon Inc.	52	MGM MIRAGE	14
Pfizer Inc.	50	CVS Caremark Corp	12
Roche Holding Ltd.	49	Bed Bath & Beyond Inc.	10
Safeway Inc.	48	Darden Restaurants, Inc.	8
Diageo plc	48	Yum! Brands, Inc.	8
Ecolab Inc.	45	Las Vegas Sands Corp.	7
Carnival Corp.	44	Burger King Holdings, Inc.	6
Staples, Inc.	43	Tim Hortons Inc.	4
The Procter & Gamble Company	42	Abercrombie & Fitch Co.	0
Anheuser-Busch InBev	38		

## Company Scores – By Industry Sector

Apparel	NIKE, Inc.	71	Household & Personal Goods	L'Oréal	54	Restaurants	Starbucks Corp.	52
	Hennes & Mauritz AB (H&M)	54		Colgate-Palmolive Company	52		McDonald's Corp.	26
	The Gap Inc.	34		Ecolab Inc.	45		Darden Restaurants, Inc.	8
	adidas AG	28		The Procter & Gamble Company	42		Yum! Brands, Inc.	8
	Limited Brands, Inc.	25		Avon Products, Inc.	27		Burger King Holdings, Inc.	6
	Abercrombie & Fitch Co.	0		The Estee Lauder Companies Inc.	24		Tim Hortons Inc.	4
Big Box Retailers	Wal-Mart Stores, Inc.	69	Beverages	The Coca-Cola Company	65	Semiconductors	Intel Corp.	72
	Carrefour SA	52		Molson Coors Brewing Company	58		Applied Materials, Inc.	67
	Staples, Inc.	43		Diageo plc	48		Taiwan Semiconductor Mfg. Co. Ltd.	56
	Target Corp.	37	Anheuser-Busch InBev	38	Texas Instruments Inc.		28	
	Best Buy Co., Inc.	36	Pharmaceuticals	Johnson & Johnson	71	Technology	International Business Machines Corp.	79
	Lowe's Companies, Inc.	17		GlaxoSmithKline plc	57		Dell Inc.	77
	The Home Depot, Inc.	15		Novartis AG	56		Sun Microsystems, Inc.	63
	Costco Wholesale Corp.	14		Pfizer Inc.	50		Hewlett-Packard Company	62
	Bed Bath & Beyond Inc.	10		Roche Holding Ltd.	49		Cisco Systems, Inc.	55
Grocery & Drug Retailers	Tesco plc	78	Real Estate	Simon Property Group, Inc.	38	Travel & Leisure	Canon Inc.	52
	Safeway Inc.	48		CB Richard Ellis Group, Inc.	37		Apple Inc.	28
	Whole Foods Market, Inc.	27		Brookfield Asset Management Inc.	27		Marriott International, Inc.	53
	The Kroger Co.	23		General Growth Properties, Inc.	16		Carnival Corp.	44
	Walgreen Company	21		Boston Properties, Inc.	16		Starwood Hotels & Resorts Worldwide, Inc.	18
	CVS Caremark Corp.	12					MGM MIRAGE	14
						Las Vegas Sands Corp.	7	

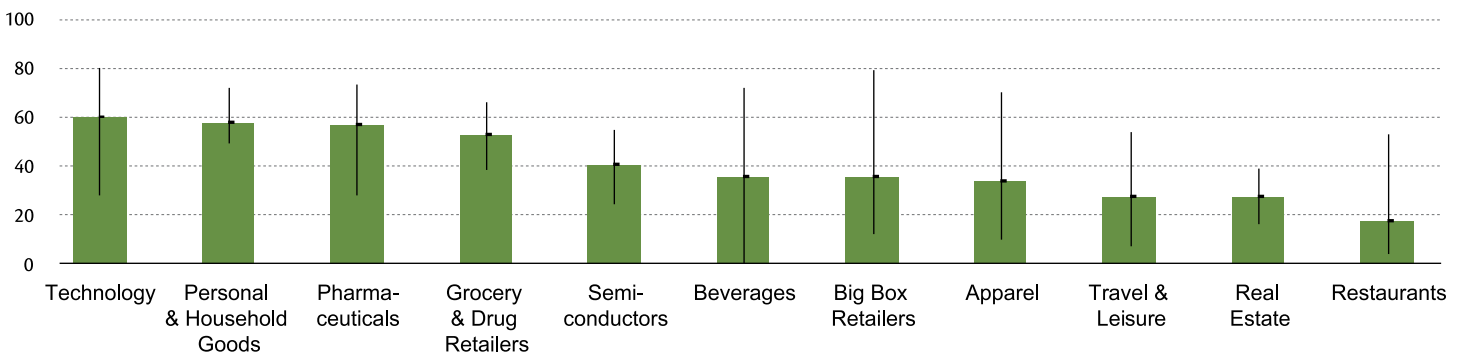


Exhibit 3: Average Scores and Ranges by Sector



## Climate Change Governance Framework – Best Practices

### Board Oversight

*Board is actively engaged in climate change policy and has assigned oversight responsibility to board member, board committee or full board.*

**Nike's** Corporate Responsibility Committee was established in 2001 to review significant policies and make recommendations regarding a wide range of corporate responsibility issues, including environmental and sustainability initiatives. The Committee meets three times each year to review strategies and plans for corporate responsibility, and either the Chairman or the CEO attends all meetings. In 2007, the Board of Directors also approved the company's new global corporate responsibility targets, which include GHG emissions reduction and climate neutrality goals.

### Management Execution

*Chairman/CEO assumes leadership role in articulating and executing climate change policy.*

**Applied Materials** CEO Michael Splinter began chairing an internal steering committee on sustainability and climate change in 2007. Splinter was also a member of the steering board to the World Economic Forum's CEO Climate Policy Recommendations to the G8 Leaders, to which Applied Materials is a signatory.

*Top executives and/or executive committees assigned to manage climate change response strategies.*

**Dell's** Sustainability Council meets quarterly to review and approve strategies, monitor progress and address risk on all sustainability issues, including climate change. The Council is led by Dell's Corporate Sustainability Director and is represented by leaders from Dell's Product Group, Facilities and Manufacturing operations, Logistics, Services and Worldwide Procurement organizations. CEO Michael Dell also sits on the Council. Examples of topics recently reviewed include the company's carbon neutrality strategy and its multi-year plan to reduce the carbon intensity of its operations.

*Executive officers' compensation is linked to attainment of environmental goals and GHG targets.*

In 2008 every **Intel** employee will have a part of their bonus linked to environmental performance as measured by product energy efficiency, Intel's environmental reputation and specific projects and targets. Managers with specific responsibility for certain climate or energy goals have a larger portion of their remuneration tied to progress on such goals.

### Public Disclosure

*Securities filings and/or MD&A disclose material risks and opportunities posed by climate change.*

**Canon** includes in the Environmental Regulations section of its 2007 Form 20-F a discussion of the Kyoto Protocol and Japan's commitment for emission reductions. In the Risk Factors section, Canon also states, "Canon is endeavoring to reduce carbon dioxide emissions by increasing its use of railroad transportation and ocean transportation to ship its products. Failure by Canon to meet its targets may adversely affect Canon's brand and image and its business."

*Public communications offer comprehensive, transparent presentation of response measures.*

In its Sustainability Report, **Johnson & Johnson** states that climate change is real and is a potential threat to human health. The report highlights GHG emissions reduction measures and discusses J&J's view on climate regulation in a question and answer format with Dennis Canavan, Senior Director of Global Energy. The company has responded to the Carbon Disclosure Project, and estimated the business impact of a 25, 50 or 100 percent increase in energy costs to its business. J&J is also a member of USCAP, and has engaged with government leaders on the US state, federal and international level in support of climate change regulation.

## Climate Change Governance Framework – Best Practices (continued)

### Emissions Accounting

*Company conducts annual inventory of direct and indirect GHG emissions and publicly reports results.*

*Company has an emissions baseline by which to gauge future GHG emissions trends.*

*Company has third party verification process for GHG emissions data.*

**Carrefour** began its GHG emissions inventory by examining the company's activity within the wider context of upstream production, transport of finished goods and downstream use and disposal of goods and services. The company has calculated Scope 1, Scope 2 and travel, logistics and products Scope 3 emissions. Carrefour's emissions inventory has also been externally verified by accounting firm KPMG.

### Strategic Planning & Performance

*Company sets aggressive absolute GHG emission reduction targets for facilities, energy use, business travel and other operations, and achieves these targets on schedule.*

**IBM** has set a number of second generation GHG emission reduction goals after surpassing its original goal. The company's main goal is to reduce CO<sub>2</sub> emissions associated with energy use by 12 percent between 2005 and 2012. In addition, IBM has set a goal to complete energy conservation projects that would save, on an annual basis, the equivalent of 3.5 percent of that year's energy usage. Between 1990 and 2005, IBM reduced or avoided CO<sub>2</sub> emissions by an amount equivalent to 40 percent of its 1990 emissions. The company also achieved its initial US EPA Climate Leaders goal by reducing total global energy-related GHG emissions by an average of 6 percent per year and PFC emissions by 58 percent from 2000 to 2005.

*Company has implemented company-wide programs to improve the energy efficiency of its operations.*

**Tesco** plans to spend £500m over the next five years on initiatives to reduce the company's energy use. This year the company invested £86 million in energy-saving technology for its stores, including low-energy lighting, energy-efficient bakery ovens, wind turbines, combined heat and power (CHP), tri-generation and hanging curtains on freezer doors. Tesco has built energy efficient prototype stores in seven countries to "trial new leading-edge technology." In the UK, the company recently opened its fourth prototype, which achieves a 60 percent reduction in GHG emissions compared to the company's standard stores.

*Company currently purchases renewable energy for a significant portion of its energy use and has set targets to increase future renewable energy purchases.*

**Safeway** began its renewable energy program in 2005. The company is currently developing approximately two dozen solar projects across California. When complete the projects should provide approximately 7,500 MWh of solar energy per year, or 20 percent of those stores' annual electricity use. The company hopes to expand the solar program to supply 40 stores. In addition, Safeway has committed to purchase 90 million kWh of renewable wind energy in 2008. This is enough energy to power 100 percent of Safeway's more than 300 fuel stations, its corporate facilities and all of its San Francisco and Boulder stores. Safeway is also a member of the EPA Green Power Partnership Program.

## Climate Change Governance Framework – Best Practices (continued)

*Company pursues strategies to maximize opportunities from product and service offerings related to climate change.*

**Hewlett-Packard** has worked on product energy efficiency since 1992, when the company launched its Design for Environment program. Today, HP is developing new IT solutions that can help reduce GHG emissions, and has categorized these solutions into three broad areas: Reduce, Substitute and Enable. HP has also developed technologies relating to solar energy and fuel cells that are available for licensing by other companies. In June 2008, HP announced that Xtreme Energetics, a solar energy system developer, will license HP's transparent transistor technology designed to generate electricity at twice the efficiency and half the cost of traditional solar panels.

---

*Company has assessed supply chain GHG emissions, engaged with suppliers on controlling emissions, addressed climate impacts of materials/packaging and improved logistics to reduce emissions.*

**Dell** has set expectations for its suppliers to manage, improve and report publicly on their GHG emissions as a consideration for awarding business. In addition, the company has set business requirements for its Tier 1 suppliers to publicly disclose their GHG emissions during Quarterly Business Reviews. In 2007, Dell hosted an Asia Climate Impact Supplier Summit in Taipei to educate its suppliers on the company's climate change strategies. Dell is also working through the Electronic Industry Citizenship Coalition (EICC) to develop a common approach for the electronics industry to measure emissions in the supply chain.

---

# Key Findings: Climate Governance

Corporate governance is critically important in determining how companies respond to climate change. Emerging GHG emissions regulations, both in Europe and the United States, are elevating the material financial risks of climate change. As Europe debates a successor plan for the European Union Emissions Trading Scheme for post-2012, the election of President-Elect Barack Obama in the US has increased certainty of federal climate change legislation. Furthermore, emerging regional, state, and city-wide climate change legislation in the US is becoming a key driver for corporate action on climate change. The launch of the Regional Greenhouse Gas Initiative in the northeast US on September 25 paved the way for regional cap-and-trade schemes which will force companies to reduce GHG emissions regardless of national legislation.

This increase in climate change legislation—coupled with unprecedented consumer awareness on the issue and a growing demand for improved corporate performance on climate change—is in turn prompting companies to work toward product and process transformations that result in new and innovative ways of doing business. Companies at the leading edge of tackling climate change are embedding environmental considerations into their capital planning, employee recruitment and incentive structures, and making this a core part of their reputation and brand strategies. Successful companies are seeing gains in resource and supply chain efficiency, employee retention, customer loyalty and bottom-line returns.

*Companies at the leading edge of tackling climate change are embedding environmental considerations into their capital planning, employee recruitment and incentive structures.*

As discussed in the previous section (How Companies Are Scored), this report utilizes a *Climate Change Governance Framework*, developed by RiskMetrics and Ceres, to rate companies' overall governance and performance on climate change on a 100-point scale. **The Board Oversight, Management Execution and Public Disclosure sections of this Framework particularly address corporate governance issues and make up 46 percent of a company's total possible score.** The remaining two sections, Emissions Accounting and Strategic Planning & Performance, are more performance-oriented and hold a slightly heavier weight (54 percent). Accordingly, a company cannot score well without having a good governance strategy in place, as this heightens the prospects that energy efficiency and GHG reduction targets will be met. In other words, good climate governance is key to an effective corporate climate change strategy; companies who integrate climate change into their board and executive structures, as well as their reporting mechanisms, are more likely maintain long term commitment and take the comprehensive approach needed to effectively implement a strong climate change strategy.

## Board Oversight

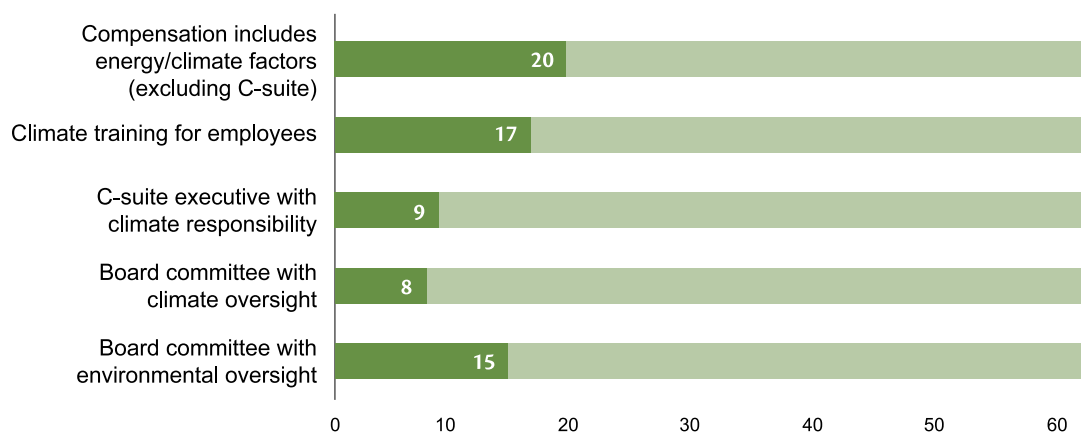
Because the companies analyzed in this report are in sectors that do not produce large amounts of direct (Scope 1) GHG emissions, they are not as likely to have established board-level oversight structures for climate change as large GHG emitters, such as utilities and other heavy industries examined in the 2006 edition of *Corporate Governance and Climate Change: Making the Connection*. Nevertheless, involvement of the board of directors is an essential element of sound corporate governance on climate change. Assigning a board member or committee to oversee climate change risks and strategies signals a company's strong commitment to the issue and increases the likelihood of a proactive response to the potential regulatory, financial, reputation and legal risks posed by climate change as well as the potential business opportunities.

This report's examination of 63 companies finds:

- Fifteen companies have a board committee that is responsible for oversight of general environmental affairs;
- Eleven companies report that their boards receive periodic reports from management on climate-related issues and are regularly reviewing associated company policies;
- Eight companies have identified a board-level committee or member with specific climate change oversight responsibilities (these are often corporate responsibility, nominating and governance, public policy or audit committees);
- No companies say their boards have conducted independent reviews of comprehensive climate risks. Similarly, none of the companies have offered training for their boards on climate change or overall sustainability issues.

Yet there still are a few companies with relatively active boards. Not surprisingly, some of the highest scorers in this study were those with board-level oversight of climate change issues.

- **Nike's** board-level Corporate Responsibility Committee, established in 2001, meets three times a year to review corporate responsibility and environmental strategies and plans. In 2007, the board of directors also approved Nike's new GHG emissions reduction and climate neutrality goals.
- **IBM's** Directors and Corporate Governance Committee, formed in 1993, reviews the company's energy conservation and climate protection goals and performance annually. The full board of directors also receives an annual report on these issues.



*Exhibit 4: Key Performance Indicators of Climate Change Governance*

## Management Execution

**CEO leadership:** For many of the leading companies analyzed in this report, commitment to climate change comes from the top. Since climate change risks and opportunities are increasingly viewed as connected to all elements of a business – from operations and product design to supply chain management – it is important that companies align their strategies and develop incentive mechanisms to maximize employee involvement across departments. Often this company-wide strategy is set by the chief executive officer. Some CEOs have taken on climate change as a personal priority and driven change throughout their companies and industry sectors.

One prominent example of CEO leadership on climate change is Tesco's CEO Sir Terry Leahy. In February 2008, Sir Terry Leahy announced the company's commitment to emissions reduction as a key component to the company's overall business goals, stating: "Our work to deliver sustainable consumption is not some add-on extra...Cutting carbon emissions is now locked into our business strategy." **Nike** CEO Mark Parker has also framed climate change as a key business strategy, stating that "tackling climate change is a catalyst for growth and innovation" in the company. Parker has driven internal policies and written to the US Congress in support of climate change legislation. Several other CEOs of companies examined in this report head sustainability or corporate responsibility committees:

*"Our work to deliver sustainable consumption is not some add-on extra...Cutting carbon emissions is now locked into our business strategy."*

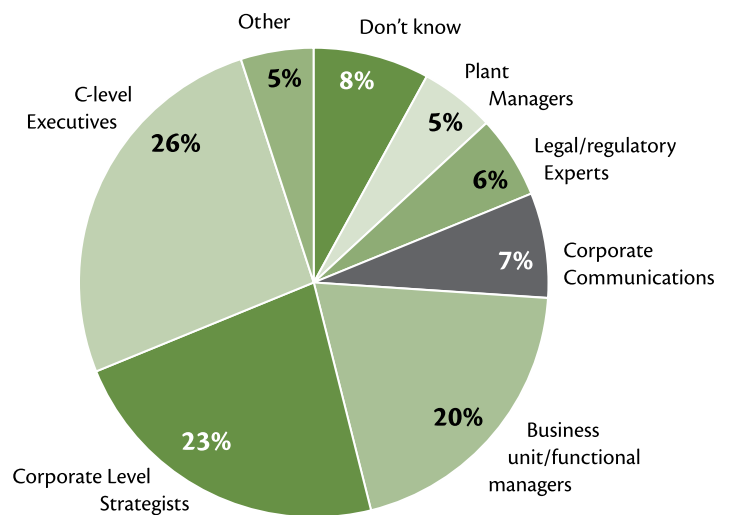
— Tesco's CEO Sir Terry Leahy

- **Dell** CEO Michael Dell sits on the company's Sustainability Council;
- **Starbucks'** CEO Howard Schultz heads its CSR Executive Committee;
- **Diageo** CEO Paul Walsh is chair of the company's Corporate Citizenship Committee;
- **L'Oreal** CEO Jean-Paul Agon chairs an Executive Sustainable Development Committee;
- **Applied Materials** CEO Michael Splinter chairs an internal steering committee on sustainability and climate change.

**Integrated management:** Another growing trend among companies is for senior managers to integrate climate change across business functions to allow for a more comprehensive approach to the issue. Whereas in the past climate change matters were often delegated to potentially silo-prone environmental affairs or corporate social responsibility units, today an increasing number of companies are pushing responsibility down through all of their lines of business. Fourteen companies say they have achieved a fully integrated management approach in their climate change strategies, and nine companies have identified a C-suite level executive with ultimate responsibility for climate-related affairs.

For example:

- **Dell's** Sustainability Council, which addresses climate change, includes leaders from the company's Product Group, Facilities and Manufacturing operations, Logistics, Services and Worldwide Procurement organizations.
- **Cisco** formed an EcoBoard in 2007, a cross-functional, executive-level body responsible for its environmental and climate change vision and strategy with representatives from 14 key business units. This is complemented by a Green Task Force that manages implementation and progress monitoring.



### Exhibit 5: McKinsey Global Survey: Climate Change Responsibility

2,192 global executives answered the question: "Which group of managers has the most responsibility for ensuring that climate change is taken into consideration?"

Source: How Companies Think About Climate Change: A McKinsey Global Survey, February 2008



**Employee engagement:** Companies are also reaching out across all levels of employees to encourage more environmentally friendly behavior and tap into the green ideas of these large pools of talent. For employees who feel passionate about the environment, these opportunities can increase job satisfaction, allowing employees to contribute to company strategy on a larger scale. Engaging employees in environmental initiatives can also help to give companies a leg up in attracting and retaining a talented employee base. A 2007 survey by employment website MonsterTRAK found that 80 percent of young workers surveyed are interested in a job that has a positive impact on the environment and 92 percent would choose to work for an environmentally friendly company.<sup>1</sup>

Employee involvement strategies now go beyond basic intranet sites and personal carbon footprint calculators to more focused employee education programs. Some companies, like **Tesco**, are identifying specific employees to serve as “green champions” in each office or factory; other companies are conducting intensive trainings for all employees. **Taiwan Semiconductor Manufacturing**, for example, hosted 16 hours of professional lectures on climate and environmental issues by external speakers in 2007. **Best Buy** has implemented extensive US EPA ENERGY STAR employee training programs across the US, which earned the company the ENERGY STAR Excellence in Appliance Retailing Award in 2008. Altogether, 17 companies in this study are offering climate change-specific training and education to employees.

**Compensation incentives:** One of the most effective ways to engage both line-level employees and senior managers is to link climate-related goals directly to compensation. This study finds that 20 companies have factored energy and/or climate change performance into employee compensation at some level, mostly for facilities managers and EHS professionals. While this is a step in the right direction, no company in this study reported to explicitly link the CEO or other C-level executive compensation to climate change goals. However, **Intel** did include environmental performance (as measured by product energy efficiency) in the bonuses of all employees for 2008. The true test will be whether or not companies take the important step of linking the company’s largest compensation packages – those of the CEO and other senior executives – to GHG emissions reduction targets or other measures of climate change performance. More detailed reporting on the integration of environmental performance into incentive structures will also help to build investor confidence in a company’s ability and commitment to address climate change risks and opportunities.

*No company in this study explicitly links the CEO or other C-level executive compensation to climate change goals.*

### **Public Disclosure**

How companies communicate with investors and stakeholders about their climate change and energy efficiency programs is vitally important from a governance standpoint. Disclosure on the material risks of climate change is of growing interest to investors, and pressure is mounting to compel more routine disclosure in securities filings. In September 2007, members of the Investor Network on Climate Risk, a \$7 trillion coalition of investors coordinated by Ceres, sent a petition to the US Securities and Exchange Commission asking that it require publicly held companies to assess and fully disclose their material financial risks and opportunities from climate change. The petition was submitted by a group of investors with \$1.5 trillion in assets along with Ceres and several other nonprofit organizations. In response to the petition, US Senator Jack Reed (D-RI) convened a Congressional hearing last winter on the role of the SEC in addressing climate change. While the SEC has not acted on these requests, in July 2008 the Senate Appropriations Committee approved language in the Financial Services Appropriations bill calling on the SEC to issue new guidance on climate-related disclosures.

1. Odell, Anne Moore. “Working for the Earth: Green Companies and Green Jobs Attract Employees.” SocialFunds.com, October 17, 2007.

*Our marketplace cannot properly function, our retirees' pensions cannot be protected, unless investors' right to know is fully enforced. We're asking the SEC to vindicate that right so investors can ensure their portfolios reflect the risks and benefits related to climate change.*

— California State Treasurer Bill Lockyer, a board member of both California's Public Employees' Retirement System (CalPERS) and State Teachers' Retirement System (CalSTRS)

The INCR initiative for mandated climate change disclosure by the SEC is reflective of a broader trend of growing investor interest in climate change. Long-term investors are realizing the significant implications climate change may have on their portfolios, and are seeking further information from companies about their preparedness to address climate risks and opportunities. Investors are beginning to use this information to inform their investment decisions, as they reassess their portfolios to uncover hidden risks and identify industry leaders who are ahead of the curve in addressing climate change.

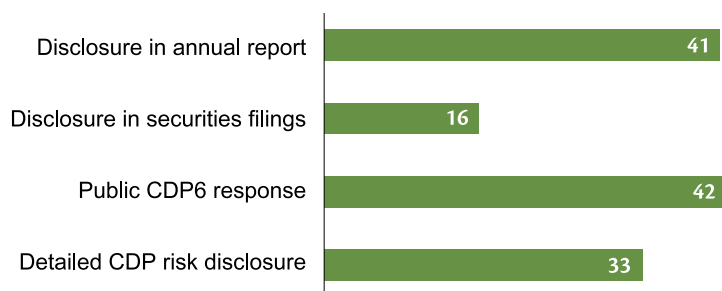
Companies have many outlets available to them to discuss climate change, including annual reports, sustainability reports, corporate websites and securities filings, as well as external reporting mechanisms, such as the Carbon Disclosure Project.

**Annual reports and securities filings:** While this study finds a growing number of companies including climate change information in their annual reporting to shareholders, the majority of this disclosure highlights internal carbon mitigation programs or commercial opportunities but does not discuss potential climate-related risks. Furthermore, while two-thirds of companies in this study mention climate change in their annual reports, just 16 discuss climate change in their most recent annual securities filings (Forms 10-K or 20-F). Even among these 16, mentions of climate change are often in the context of addressing general environmental risks or again highlighting commercial opportunities, with little discussion of material risk. More robust disclosures in recent securities filings include the following:

- **Canon** stated in the Risk Factors section of the company's 2007 Form 20-F that the company is "endeavoring to reduce carbon dioxide emissions by increasing its use of railroad transportation and ocean transportation to ship its products. Failure by Canon to meet its targets may adversely affect Canon's brand and image and its business."
- **General Growth Properties** stated in its 2007 Form 10-K that its coastal properties could be vulnerable to sea level rise as well as increased hurricane and storm activity resulting from climate change.

**Carbon Disclosure Project:** Many companies are asked to fill out an annual questionnaire from the Carbon Disclosure Project, which has backing from 385 institutional investors with \$57 trillion in assets under management. Forty-two companies analyzed in this report provided a public response to the most recent CDP questionnaire, with results issued in September 2008 (two companies included in this study were not part of the survey universe). Of these 42 respondents, 33 provided details on their exposure to regulatory, physical or other risks related to climate change.

Given the predominance of US companies in this study, many of their discussions centered on the merits of alternative regulatory proposals under consideration at the federal level, such as cap-and-trade allocation schemes vs. carbon taxes, and how this might affect their costs of energy.



**Exhibit 6:**  
**Securities Filings Disclosure Still Lags Behind Other Forms of Reporting**

Others described how the physical impacts of climate change, such as changing weather patterns, might affect their supply chains and customer preferences. **Molson Coors** went so far as to identify specific physical risks for individual corporate locations, such as its Golden facility in Colorado, which is dependent on mountain snow pack for process water, and its Burton brewery in the United Kingdom, which has been subject to flooding risk due to recent record rainfall in the region.

*Translating climate change performance metrics into meaning and accessible indicators for investors can be a real challenge, but several companies are headed in this direction.*

**Real-time reporting:** More investors are seeking sustainability reporting from companies in line with quarterly financial reporting or even real-time reporting. Translating climate change performance metrics into meaningful and accessible indicators for investors can be a real challenge, and it is important for companies to be clear about the assumptions they use as part of real time data modeling. **Dell** has an energy savings meter displayed on its Dell Earth website that calculates in real time CO<sub>2</sub> emissions avoided and customer dollar savings generated by the company's new OptiPlex desktop systems with Energy Smart settings. **Anheuser-Busch InBev** recently launched an Ecological Meter on its website to present "eco indicators," such as volume of recycled water and rates of solid waste reuse, in real time. These metrics can be monitored minute by minute or over longer periods of time. Such metrics could be extended to GHG emissions.

### Public Policy Support

In addition to making disclosures on their own climate change strategies, companies also need to be transparent about their views on climate change regulatory action and what kinds of policies and regulations they support. Even companies that are not themselves large GHG emitters may be subject to rising energy costs as a result of such legislation. Others may be subject to increasingly stringent energy efficiency standards for buildings and products, while renewable portfolio standards that require electric utilities to add more alternative energy to their portfolio could raise end-user energy costs.

Europe is ahead of the United States in this respect. The debate there now centers on how to shape the future of the European Union's emissions reduction and renewable energy goals for 2020. Many corporate leaders in Europe are questioning whether Europe can maintain its commitments under the Kyoto Protocol, particularly since the onset of the credit crisis. They are also looking ahead to the post-2012 Kyoto negotiations and whether a deal can be struck at a meeting to be held in Copenhagen in December 2009. Several European companies in this report are taking active policy engagement roles:

- **Tesco** is working with the European Commission and European Parliament on policy development for climate-related issues such as carbon-labeling. According to Tesco, "Business taxes and incentives must be redirected from a high-carbon to a low-carbon economy, with a greater focus on promoting demonstration, early deployment and development of low carbon technologies."
- **adidas** has cooperated with government institutions such as the German National Environmental Agency for a project to harmonize and define CO<sub>2</sub> calculation systems across Europe. In November 2007, adidas signed the Bali Communiqué calling for a comprehensive, legally-binding United Nations framework to tackle climate change (other signatories include **Coca-Cola, Sun Microsystems, Nike, Johnson & Johnson, L'Oréal, Diageo, and Hewlett-Packard**).

In the US, all eyes are on what actions the next US Congress might take under the leadership of President-elect Barack Obama, who supports substantial reductions in US and global GHG emissions. For many US companies, federal climate change legislation would be welcome news; current state and local mandates have created a complex patchwork of climate change regulatory policy. Most

important is the establishment of a common market price for carbon emissions that will provide increased confidence in long-term investment decisions. With the economic downturn companies are also more vocally supporting clean tech investment and green job creation.

US companies that have also been particularly active in supporting climate legislation include:

- **Cisco** actively supported the data center energy efficiency and smart grid provisions, which passed in the US Energy Independence and Security Act of 2007, through its membership in the Information Technology Industry Council, the Green Grid and the GridWise Alliance.
- **Johnson & Johnson** has written numerous letters to the US Congress in support of the Federal Production Tax Credit for Renewable Energy and the Lieberman-Warner Climate Security Act. The company also wrote to European Union President José Manuel Barroso expressing support for the European Energy Strategy, and it signed the Bali Communiqué in December 2007.
- **Wal-Mart** executives testified before the US Senate on two occasions, in April 2006 and May 2007, to advocate for a well-designed federal cap-and-trade system. The company has also advocated for involving consumers as part of an eventual regulatory solution and said in a letter to the US Senate in June 2008, “Retailers often have the greatest impact on consumer choice through promotion, display and, of course, pricing.”

## GHG Emissions Inventories

As the United States and its global trading partners move closer to binding controls on GHG emissions, it is becoming increasingly vital for companies to begin inventorying emissions associated with their operations. Forty companies in this study are already tracking and reporting their Scope 1 (direct) emissions and Scope 2 (purchased energy) emissions. Thirty-seven of these companies are using an international standard for emissions accounting—typically the World Resources Institute and the World Business Council for Sustainable Development’s GHG Protocol. It is important to note, however, that a number of companies are continuing to use various methodologies for calculating and measuring GHG emissions, so comparability of inventories remains a challenge. Some companies exclude certain regions or facilities from their inventories, while others make estimates based on country-level electricity use figures.

Not only is developing an emissions inventory a critical step in implementing a GHG emissions reduction strategy, but publicly disclosing this inventory is equally important. In the US, there remains little doubt that a cap-and-trade system for carbon emissions will be implemented in the next few

## New Initiatives: The Business for Innovative Climate and Energy Policy

In November 2008, President-elect Barack Obama renewed his promise to make climate change a chief priority for his administration, promising aggressive targets to cut GHG emissions. As the question shifts away from whether or not the US will adopt legislation to how this regulation will shape up, companies across all sectors of the economy are weighing in. On November 19, 2008, five US companies joined with Ceres to launch The Business for Innovative Climate and Energy Policy (BICEP), a new business coalition calling for strong US climate and energy legislation in early 2009 to spur the clean energy economy and reduce GHG emissions. The coalition, whose founding members include **Nike**, **Sun Microsystems**, and **Starbucks**, are promoting policy recommendations based on a set of eight energy and climate principles:

- set short- and long-term greenhouse gas reduction targets;
- stimulate ‘green’ job growth;
- adopt a national renewable portfolio standard;
- capture vast energy efficiency opportunities;
- boost investment in renewable energy, energy efficiency and carbon capture and storage technologies;
- establish cap-and-trade system with 100% auction of carbon allowances;
- encourage transportation for clean energy economy; and
- limit construction of new coal plants to those that capture and store CO<sub>2</sub>.

The coalition’s goal is to work directly with key allies in the business community and members of Congress to pass meaningful energy and climate change legislation consistent with these eight core principles.



## Spotlight on External Verification of Emissions Inventories

The range of options for auditing a GHG emissions inventory can be dizzying. Beyond official emissions registries and voluntary government programs, several private-sector players are involved in this growing business. Large accounting firms and specialist environmental consultancies are building up expertise in this area. Many companies also have their inventories checked through the International Organization for Standardization's ISO 14001 for environmental management systems or ISO 14064 for GHG emission quantification and reporting.

Today, verification methods vary from reviewing utility bills provided by the company to on-site reviews of how inventory data is being collected. An audit may cover corporate or facility-level data. In general, there has been a trend over the past several years from more customized verification processes to standardized and mandatory methods.

One option is to have an inventory verified as part of a mandatory or voluntary emissions trading scheme. In Europe, the EU ETS requires emissions verification for covered industrial sites. In the US, companies that sign up for voluntary targets as members of the Chicago Climate Exchange have their inventories audited by the Financial Industry Regulatory Authority (FINRA). The audit involves selecting a sample of inventory data points and reviewing electricity billing data to verify that the bill data matches the submitted inventory data.

The US EPA Climate Leaders program provides technical assistance to member companies in order to complete and document emissions inventories. The program also performs desktop reviews of inventory data and risk-based on-site reviews to ensure that companies are implementing inventory management plans at the facility level.

SGS Group and Bureau Veritas are two of the largest standards and quality verification firms, both with specialized practices relating to climate change. Services are wide-ranging, but as one example Bureau Veritas has worked with companies to establish audit protocols for facility energy management systems so that energy data is correctly reported.

Challenges remain in auditing some sources of corporate GHG emissions, such as through co-generation and shipping. This means that standards for how emissions inventories are verified are becoming increasingly important. Verifier accreditation processes have already been established in the United Kingdom and California. In April 2007, ISO launched a new standard, ISO 14065:2007 with requirements for use in accrediting or recognizing GHG verifiers. The International Auditing and Assurance Standards Board (IAASB) is also working on a standard for assurance of carbon emissions information.

years—and it won't be long before a company's GHG emissions turn up as regulatory costs on its balance sheets. In the absence of a formal GHG emissions registry in the US, investors are looking to companies to self-report their GHG emissions to help them gauge a company's preparedness for climate legislation.

The next challenge for companies with emissions inventories is to measure their Scope 3 emissions, which under the GHG Protocol include emissions from business travel, logistics, product use/disposal and a company's supply chain. Scope 3 emissions often comprise a significant portion of a company's total GHG footprint, but are also often the most difficult to measure.

Fifteen companies in this study report Scope 3 emissions from business travel only, while only five companies – **Apple, Canon, Carrefour, Diageo** and **GlaxoSmithKline** – provide data on emissions associated with the use and disposal of their products. But given that these companies are in a wide range of industries, it suggests that firms in most, if not all, sectors could calculate their product emissions eventually. Finally, only three companies are reporting supply chain inventories – **Canon, Diageo** and **Taiwan Semiconductor Manufacturing**. But these companies may be joined by more peers soon. Ten other companies – **Tesco, H&M, Nike, Coca-Cola, Molson Coors, Johnson and Johnson, Pfizer, IBM, Wal-Mart** and **Hewlett Packard** – report that they have begun to measure their supply chain emissions.

External verification of inventories is also becoming increasingly important, particularly as the prospect of climate legislation looms in the United States (see box). Of the 40 companies that have disclosed their GHG emissions, 29 also reported using an external auditor or government program to verify that inventory. A recent AccountAbility and Consumers International study found that 70 percent of respondents in the US and UK believe that corporate climate change reporting should be verified by independent parties.<sup>2</sup>

2. *Assure View: The CSR Assurance Statement Report*, CorporateRegister.com, July 2008.

# Key Findings: Operations

A company's first line of defense in combating climate change is typically its own operations. This study highlights a broad range of strategies that are being employed to control operational emissions — everything from setting emission reduction targets to retrofitting buildings and using information technology in new ways to improve energy efficiency. For the high energy-consuming companies evaluated in this report, energy efficiency is critical to a successful emissions reduction strategy. Leading companies recognize that energy efficiency programs offer solid investment returns, sustained operating results and opportunities for innovation and competitive advantage in a carbon-constrained world. In addition, many companies are investing in renewable energy through direct renewable energy purchases, on-site generation at stores and warehouses and support of research and development programs.

## Setting Emission Reduction Targets

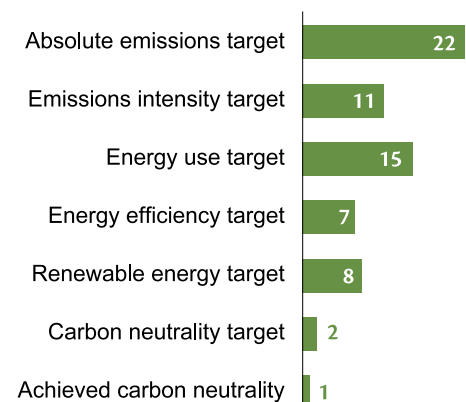
Setting targets to reduce GHG emissions is becoming a norm for corporate climate change strategies; roughly half of the 63 companies evaluated in this report have established quantitative emission reduction targets for their Scope 1 and 2—and occasionally even some Scope 3—GHG emissions. Many companies are even taking the extra step of setting both emissions and energy use targets – of the 33 companies who have set emission reduction targets, nearly two-thirds (20 companies) have also set energy use or energy efficiency targets.

Quantitative emission targets are a key component to an effective climate change strategy. Clearly, the strength and timeframe of the target determines the aggressiveness of the target and demonstrates the level of commitment the company is making to achieving real, measurable progress in addressing climate change. Equally important is the distinction between absolute and intensity targets. Companies setting absolute targets commit to reduce emissions by a specific quantifiable amount (often expressed as a percentage below a baseline year level). Intensity targets, on the other hand, seek to improve a company's emissions efficiency, reducing emissions per employee, dollar of revenue, square foot, or other metric.

While intensity targets can be useful for evaluating the efficiency of a company's operations and processes, they allow for total emissions to increase with organic growth or acquisitions made by the company. Absolute emission targets, however, put companies more on track to making the types of absolute emission reductions that will be required globally to stabilize atmospheric levels of carbon dioxide. Of the 63 companies evaluated in this report, one-third have set absolute emission reduction targets.

Some companies have also set carbon neutrality targets, in which they commit to achieving zero net emissions through an array of emission reduction and offset strategies, including renewable energy purchases and investment in carbon offset projects. While carbon neutrality can be an appealing concept to companies and their consumers, how companies design and implement their carbon neutrality strategies has come under scrutiny. Some companies have been criticized for using investments in carbon offset projects to avoid making operational efficiency improvements. Furthermore, there continues to be much inconsistency in the carbon offset market, generating uncertainty about the actual emission reductions certain offset projects yield.

*Roughly half of the 63 companies evaluated in this report have established quantitative emission reduction targets. One third of these companies have set absolute emissions targets, and nearly two-thirds of all companies with targets have established energy use or energy efficiency targets in addition to their emissions reduction goals.*



**Exhibit 7: Company GHG Emissions and Energy Use Reduction Targets**



Other companies, like **Dell** and **CB Richard Ellis**, have used carbon neutrality targets as a means of implementing a multi-pronged strategy that includes a range of emission reduction initiatives. For **Dell**, carbon offsets are the last component to a strategy that prioritizes maximizing energy efficiency and renewable energy purchases. Dell has pledged to offset remaining Scope 1 and 2 emissions and business air travel emissions once opportunities to employ other emission reduction strategies have been exhausted. Furthermore, Dell has committed to purchasing only “certified or other high quality, renewable energy credits and validated offsets.” Like Dell, **CB Richard Ellis** set a carbon neutrality target and has elected to only use carbon offsets as a last resort after energy efficiency and renewable energy. The carbon neutrality target is for the office buildings where CBRE staff work, not client-occupied properties.

### Addressing Energy Efficiency in Property Management

Buildings are responsible for a large share of corporate GHG emissions. By some estimates, 40 percent of US GHG emissions come from lighting, heating, cooling, ventilation and other power needs of the nation’s homes, offices, factories, shopping centers and warehouses. Energy use also typically accounts for the highest proportion of a building’s operating expenses—about 28 percent on average in 2007.<sup>3</sup>

Companies are employing a wide variety of approaches to reduce the energy consumption of both new and existing buildings by setting stricter efficiency standards for new building construction, launching large retrofit initiatives and changing energy use practices in stores and offices. Enhanced energy management systems (EMS) are particularly critical to achieving significant buildings-related energy efficiency gains. Even greater savings will be achieved as more companies shape their energy use profiles around the load demand characteristics of their local power suppliers, with an emphasis on reducing the most costly energy use at times of peak demand.

While all 11 industry sectors examined in this report face common challenges in reducing their buildings-related energy use and subsequent GHG emissions, companies are finding sector-specific approaches to achieving significant cuts in energy consumption. Companies in the real estate sector, for example, are looking to optimize existing energy efficiency standards for the buildings in their property portfolios, while leading companies in sectors such as big box retail, grocery and restaurants are searching for new store designs that maximize efficiency gains.

**Real Estate:** With regard to energy efficiency cost-savings and other business opportunities, the real estate sector is in a class by itself. According to the Clinton Climate Initiative of the William J. Clinton Foundation, buildings are the source of more than half of most cities’ GHG emissions, and in large, concentrated urban areas like New York and London that number can exceed 70 percent.<sup>4</sup> This puts building developers, owners, managers and tenants on the front lines of finding ways to reduce energy use and associated GHG emissions.

Addressing energy efficiency on a portfolio-wide scale is the key challenge in achieving a successful climate change strategy in the real estate sector. Companies’ property portfolios are many orders of magnitude larger than their own operations; at **Boston Properties**, for example, employees work out of six office buildings, but the company manages a portfolio of some 142 properties. This report finds that real estate companies are beginning to improve the energy efficiency of their buildings on a portfolio-wide scale:

- **Brookfield Asset Management** subsidiary Brookfield Property has taken on Building Owner and Management Association’s 7-Point Challenge to raise the efficiency of energy use in its property portfolio by 30 percent by 2010.

3. Building Owners and Managers Association. Experience Exchange Report, 2007.

4. <http://www.clintonfoundation.org/what-we-do/clinton-climate-initiative/our-approach/major-programs/making-buildings-green>; accessed on October 15, 2008.

# Company Targets and Achievements

## Energy Use Reduction Targets

	Target	Baseline Year	Target Year	Region
Avon	10% per unit production	2000	2008	Global manufacturing operations
Brookfield Asset Management	30%	—	2012	Brookfield Properties real estate portfolio
CB Richard Ellis	5%	2007	2008	United Kingdom
	10%	—	2008	CBRE Asset Services building portfolio
Colgate-Palmolive	20% per unit production	2002	2010	Global
Dell	Varies	—	—	Individual targets by region
IBM	3.5% in savings	—	Annual	Global
Anheuser-Busch InBev	10% per hectoliter of product	2008	2010	Global production
Intel	5% annual reduction per chip	2007	2012	Global
Kroger	30%	2000	2010	All Stores
L’Oreal	5% per unit of production	2007	2008	Factories and distribution centers
Marriott International	25% per available room	2007	2017	Fuel consumption
Molson Coors	4%	2007	2008	Global
Proctor & Gamble	40% per unit production	2002	2012	Global
Roche	10% GJ/employee	2005	2010	Global
Starbucks	25%	2008	2010	Company-operated and international stores

## Energy Efficiency Targets

	Target	Baseline Year	Target Year	Region
Carnival	0.25 to 2.5%	—	Annual	By operating line
Carrefour	20% (kWh/m <sup>2</sup> )	2004	2015	Global
Coca-Cola	40-50%	2000	2010	Cold drink equipment
H&M	20%	TBD	2020	All stores
Novartis	10%	2006	2010	Global
Sun Microsystems	3%	FY2007	FY2008	All buildings
Wal-Mart	100%	2005	2015	Truck fleet

## GHG Emission Reduction Targets (Absolute)

	Target	Baseline Year	Target Year	Region
Applied Materials	50,000 mtCO <sub>2</sub> e	2006	2012	Global
Canon	10%	2000	2008	Operational site emissions
Cisco Systems	25%	2007	2012	Global
Coca-Cola	No CO <sub>2</sub> growth	2004	2015	System-wide manufacturing operations
Colgate-Palmolive	5%	2002	2010	Global
Diageo	50%	2007	2015	Global
GlaxoSmithKline	10%	2006	2010	Global
Hewlett-Packard	16%	2005	2010	HP-owned and leased facilities worldwide
IBM	12%	2005	2012	Global
Intel	20%	2007	2012	Global
Johnson & Johnson	7%	1990	2010	Global
L'Oreal	2%	2007	2008	Global
Marriott International	1 million tons CO <sub>2</sub> e	2000	2010	Company's carbon footprint
Novartis	5%	1990	2012	Global Scope 1
Pfizer	20%	2007	2012	Global
Safeway	6%	2000	2011	United States
Staples	7%	2001	2010	United States
Sun Microsystems	20%	2007	2015	Global
Taiwan Semiconductor Manufacturing	10%	1997 & 1999 average	2010	Taiwan
Tesco	50%	2006	2020	Global existing stores and distribution centers
Texas Instruments	10% PFC reduction	1995	2010	Global
Wal-Mart	20%	2005	2012	Existing stores and all distribution centers

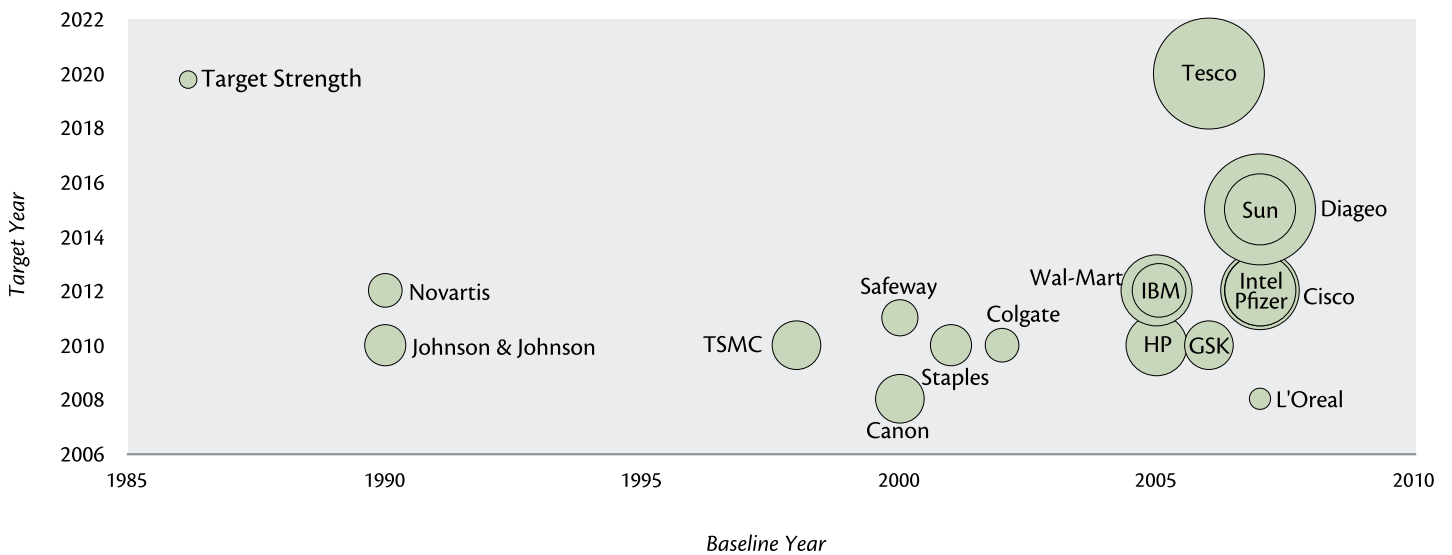


Exhibit 8: Absolute Emissions Reduction Targets

## GHG Emission Reduction Targets (Intensity)

	Target	Baseline Year	Target Year	Region
Avon	5% per unit production	2002	2012	Global manufacturing operations
CB Richard Ellis	Carbon neutral	—	2010	Global
Colgate-Palmolive	25% per ton of production	2002	2010	Global
Dell	15% carbon intensity and carbon neutral	2006	2012	Global
EcoLab	15% per ton production	2007	2012	US only
GlaxoSmithKline	45% per unit net operating revenue	2006	2015	Global
H&M	10% relative to sales	2004	2009	Global
Anheuser-Busch InBev	10% per hectoliter of product	2008	2010	Global production
Molson Coors	12% indexed to production	2005	2010	US only
NIKE	Carbon neutral	—	FY15	All facilities and business travel
Proctor & Gamble	40% per unit production	2002	2012	Global
Roche	10% per million CHF sales	2003	2008	Global
Gap Inc.	11% per square foot	2003	2008	United States

## Target Achievements

	Target	Baseline Year	Target Year	Region
Avon Products	30% energy use reduction	2000	2007 (1 year early)	Global manufacturing
Canon	12% GHG reduction per unit of net sales	2000	2007	Operational site emissions
Colgate-Palmolive	28% energy efficiency improvement	1998	2007	Global
Dell	Carbon neutral	—	2008	Global
Hewlett-Packard	20% energy use and GHG reduction	2005	2007 (3 years early)	Products & Operations
H&M	21% GHG reduction relative to sales	2006	2007 (2 years early)	Global
IBM	40% of 1990 GHG emissions reduction	1990	2005	Global
Johnson & Johnson	12.7% absolute GHG reduction	1990	2007 (3 years early)	Global
L'Oreal	5% reduction in Scope 1 & 2 emissions	2005	2007	Global
Nike	18% absolute GHG reduction	1998	2005	Global
Novartis	1 <sup>st</sup> generation energy efficiency target	2004	2006	Global
Pfizer	43% CO2 reduction per million \$ revenue	2000	2007	Global
Roche	10% GHG reduction per million CHF sales	2003	2008	Global
Sun Microsystems	20% GHG reduction	2002	2008 (4 years early)	United States
Tesco	50% energy use reduction per square foot	2000	2008 (2 years early)	United Kingdom
Texas Instruments	48% PFC reduction	1998	2007	Global

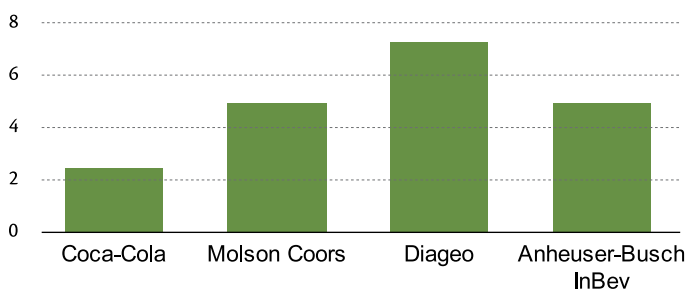
## Water as an Emerging Climate Change Issue

Water use is an emerging operational issue that presents both risk and opportunity for businesses. The not-for-profit Pacific Institute highlights several water-related business risks that require corporate attention including pricing, availability, quality and the heightened sensitivity required of companies that operate in water scarce areas<sup>1</sup>. In a 2007 report on corporate water reporting, the Pacific Institute noted that even firms in high water-risk sectors have limited disclosure on water and often overlook certain business risks such as the potential for water-related supply chain interruption<sup>2</sup>.

Several companies in this study mentioned the risk of increasing water scarcity due to climatic changes in their most recent responses to the Carbon Disclosure Project. Beverage companies are the most specific with firms such as **Molson Coors** specifying regional differences in water risk that its facilities face. Several firms have water conservation programs, but only a few have set quantitative reduction targets for water consumption or wastewater generation. **Coca-Cola** and **Anheuser-Busch InBev** both have water use targets, while **Canon** has set a goal for 2008 to reduce water use per unit of net sales by 25 percent from 2000 levels.

**IBM's** semiconductor manufacturing operations have annual water conservation targets. IBM is also researching how technology solutions can be used for water management and preservation efforts. The company hopes to partner with other technology firms with remote sensing, IT and modeling expertise to form an educational organization that would enable the water industry to take advantage of existing technology for improved water management.

1. Morrison, Jason and Gleick, Peter, Freshwater Resources: Managing the Risks Facing the Private Sector, Pacific Institute for Studies in Development, Environment and Security, August 2004.
2. Morikawa, Mark, Morrison, Jason and Gleick, Peter, Corporate Reporting on Water: A Review of Eleven Global Industries, Pacific Institute for Studies in Development, Environment and Security, May 2007.



### Exhibit 10: Beverage Producers' Water Use:

#### Ratio of Liters of Water Used Per Liter of Product Produced

\* Ratios are not directly comparable between companies due to variable product mixes. Data sourced from companies' most recent public sustainability reports.

## Exhibit 9: Water Risks for Key Sectors

Sector	Potential Water Risks
Apparel	<p>Availability of water and quality of water for:</p> <ul style="list-style-type: none"> <li>• Washing and processing</li> </ul> <p>Increased variability in patterns of precipitation and temperature leading to seasonal stocking risks</p>
Beverages	<p>Availability of water and quality of water used as/in:</p> <ul style="list-style-type: none"> <li>• Solvent and process carrier</li> <li>• Coolant (mixing equipment)</li> <li>• Feedstock</li> <li>• Process aid</li> <li>• Effluent dilution</li> <li>• Steam feedstock for cooking processes</li> </ul>
Grocery Retailers	<p>Water quantity and quality for washing and processing</p>
Personal & Household Goods	<p>Water resource availability affecting:</p> <ul style="list-style-type: none"> <li>• Water prices</li> <li>• Legislative drivers for improving project design ahead of industry capacity to cope or consumers to afford</li> </ul>
Pharmaceuticals	<p>Availability of water and quality of water used in:</p> <ul style="list-style-type: none"> <li>• Cleaning</li> <li>• Process solvent and carrier</li> <li>• Feedstock</li> <li>• Coolant (fermentation and chemical processes)</li> <li>• Steam feedstock for evaporation, separation, reaction and fermentation processes</li> <li>• Safety agent (emergency diluents for releases)</li> </ul>
Real Estate	<p>Availability of water resource:</p> <ul style="list-style-type: none"> <li>• Requirement to build into new and existing developments the ability to harvest and store rainwater to prevent over exploitation of water resources in drier climate</li> </ul> <p>Flooding risks</p>
Semiconductors	<p>Availability of water and quality of water used in:</p> <ul style="list-style-type: none"> <li>• Cleaning; process carrier (etching)</li> <li>• Coolant</li> <li>• Safety agent (emergency diluents for releases)</li> </ul>
Travel & Leisure	<p>Availability of water and quality of used water in:</p> <ul style="list-style-type: none"> <li>• Construction</li> <li>• Processing aid (cooking)</li> <li>• Laundry facilities</li> <li>• Land drainage</li> <li>• Irrigation for golf courses, lawns, swimming pools</li> </ul> <p>Changes to disease vector populations due to temperature changes or increased variability in precipitation</p>

Adapted from *Half full or half empty?*, a report prepared for United Nations Environment Programme Finance Initiative by Dr. Olivia Jensen and Dr. Ceema Namazie, ICF International, October 2007.

*Energy efficiency presents a significant—and largely untapped—opportunity for the restaurant sector. Restaurants on average use five times more energy per square foot than any other type of commercial building.*

- **Simon Property Group** sets its own annual energy reduction targets for properties under its operational control. This has resulted in \$12 million in annual cost savings at its shopping malls since 2004. The company also helps its tenants manage energy use by installing meters and by obtaining the US Green Building Council (USGBC)'s Leadership in Energy and Environmental Design (LEED) Core and Shell certification for its malls.

Some of this increase in focus on energy efficiency in the real estate sector has been spurred by investor pressure. Since 2005 investors have filed shareholder resolutions to urge property managers and homebuilders to adopt formal energy efficiency targets and GHG reduction goals. These resolutions have been widely supported, with voting support reaching as high as nearly 40 percent. Two companies in this report – **Boston Properties** and **Simon Property Group** – are among the companies receiving such shareholder resolutions.

**Big box and grocery retailers:** Due to the sheer number and size of the stores they operate around the globe, the largest big box retailers and grocery stores are particularly motivated to find energy efficiency solutions that can be applied across their entire network of stores. **Tesco** and **Wal-Mart** are both developing energy efficient designs that can be rolled out to stores around the world.

- For **Tesco**, 67 percent of the company's carbon footprint is attributable to electricity and natural gas use. The company has built energy efficient prototype stores in seven countries, and a new store in the UK has achieved a 60 percent GHG emission reduction compared to the company's standard stores.
- **Wal-Mart** is working on several prototype generations and recently opened its High Efficiency (HE.5) prototype in Las Vegas that features improvements in heating, cooling, refrigeration and lighting systems that are up to 45 percent more efficient than Wal-Mart's baseline Supercenters. Wal-Mart has set a goal to design and open a viable prototype by 2009 that is up to 25 or 30 percent more energy efficient than its 2005 baseline store.

**Restaurants:** Energy efficiency also presents a significant—and largely untapped—opportunity for the restaurant sector. Restaurants on average use five times more energy per square foot than any other type of commercial building. According to Pacific Gas & Electric (PG&E), however, nearly 80 percent of the \$10 billion spent annually on energy by the commercial food service sector is lost through inefficient cooking methods, refrigeration and storage.<sup>5</sup> Some of the companies evaluated in this report have taken steps to address these inefficiencies:

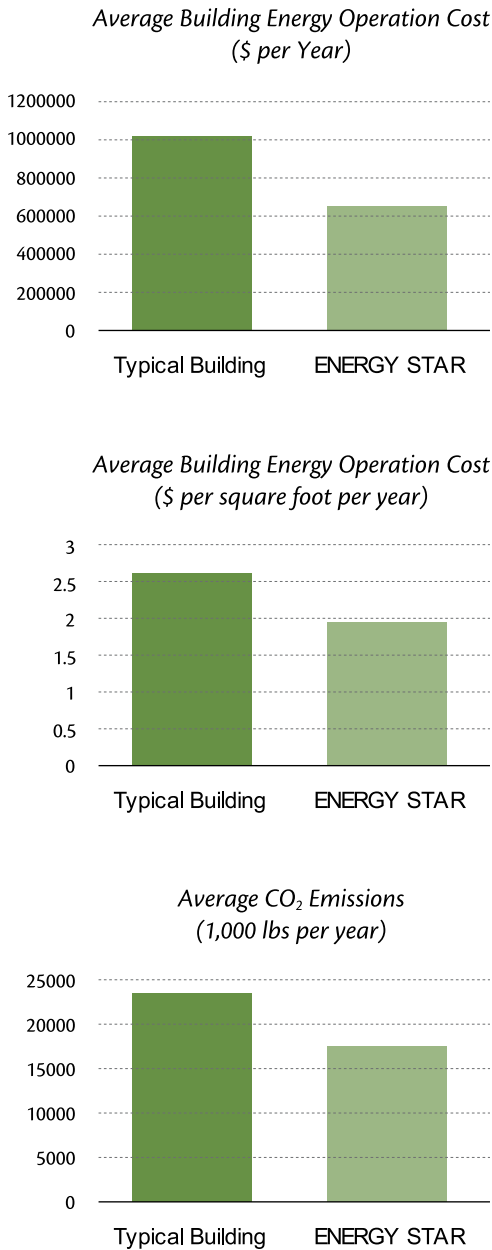
- **Burger King**, for example, has introduced a new restaurant design, known as the Return On Capital design, focused on energy efficiency to reduce heating and cooling costs. The company has already constructed 110 buildings according to this design.
- **McDonald's** has launched an interactive software program for its French chain that will help monitor and reduce energy consumption in restaurants. Furthermore, both companies are experimenting with new cooking equipment, such as efficient broilers and fryers, to improve cooking efficiencies.

Such efforts at greening restaurant chains to improve energy efficiency—perhaps in combination with local sourcing of organic foods—might attract more customers looking for new, innovative dining options. Still, the restaurant sector has a long way to go in this area; of the six restaurants analyzed in this report, three were found to have taken minimal or no actions to improve the energy efficiency of their buildings.

---

5. "Can restaurants go green, earn green?" *USA Today*, May 15, 2008.





**Exhibit 11: Energy Cost Comparison: Energy Star-Labeled v. Typical Building**

Source: Costar Group, 2008

## Building Certification Programs

The introduction of standards and certification programs are helping companies to introduce energy efficiency gains across their property portfolios. Real estate firms are taking advantage of these programs to benchmark their performance, set reduction targets and attract new clients. Popular US recognition programs include ENERGY STAR from the Environmental Protection Agency, the Leadership in Energy and Environmental Design (LEED) program from the US Green Building Council and awards from the Building Operators and Managers Association (BOMA). Other standards and certification programs globally include Green Globes in North America and the BRE Environmental Assessment Method (BREEAM) developed in the United Kingdom.

- In the hotel industry, **Marriott International** has the most properties with ENERGY STAR certification – more than 200 of its 3,000 plus properties – and plans to increase this number by 33 percent in 2008.
- In the real estate sector, **Simon Property Group** is collaborating with ENERGY STAR to develop energy use benchmarks for shopping malls. Simon Property believes that the benchmarks will be critical in an eventual cap-and-trade system to manage carbon emissions.
- **CB Richard Ellis** was named an ENERGY STAR Partner of the Year in both 2007 and 2008. The firm is benchmarking its office building portfolio through ENERGY STAR tools and seeking the ENERGY STAR label. It has also enrolled 100 US office buildings in the USGBC Portfolio Program to attain LEED certification.

Since LEED launched in 2000, the number of certified and registered projects has grown as much as 700 percent a year. The challenge now for large companies is to be able to simplify the application and approval process and move toward certification of entire property portfolios.

- **Safeway** and **Walgreens** are both working with the USGBC on the LEED Retail Portfolio Program, a portfolio approach to create two new rating systems specific to the retail sector. Safeway also plans to integrate LEED criteria into its standard design and construction practices.
- Similarly, **Tesco** and **Starbucks** are working with the USGBC on the LEED Volume Certification Program, which would allow companies to submit store prototypes one time for the certification process.
- **Intel** is working with the USGBC to set certification standards for wafer fabrication facilities.

Some companies are moving ahead with a portfolio approach on their own.

- **Starwood Hotels & Resorts** announced its first LEED-mandated brand, ELEMENT, in April 2008, which will include several energy efficiency features.
- **L’Oreal** has established a new Sustainable Buildings Policy that requires all new major construction and significant renovation projects to meet LEED standards or equivalent local certifications.

## Unique Governance Approaches to Managing Internal Energy Efficiency

**Specialized task forces:** EHS and facilities managers often lead a company's energy efficiency and conservation efforts. Companies across industry sectors also are forming specialized task forces to address energy reduction goals.

- **Colgate-Palmolive** has tasked a Global Energy Reduction Team to come up with new energy-saving opportunities. Since 1998, the company has improved overall energy efficiency by 28 percent, saving an estimated \$5.6MM in energy costs.
- **Sun Microsystems** has given a Global Lab & Datacenter Design Services group the authority and budget to improve IT infrastructure with environmental considerations in mind.

**Employee programs:** Transforming employee behavior is also a key component of the energy conservation challenge. Companies have gained ground through specialized recognition and training programs.

- **McDonald's USA** has started a recognition program to showcase "Energy All-Stars" – franchisees, restaurant managers, corporate staff and suppliers who excel at applying the company's best practices to control energy usage.
- **Nike** has launched the Nike Energy Challenge, a competition among company facilities to determine which can be the most energy efficient.
- **Tesco** has "Energy Champions," employees that are trained specifically to motivate and educate colleagues on saving energy.

**Capital allocations:** Another strategy employed by some companies is to establish a dedicated capital fund for energy efficiency and conservation projects. This assures that such projects can go ahead even if other areas of the business slow down and budgets become constrained. Such allocations also help companies establish guidelines for what types of projects should be pursued and what investment returns can be expected.

- **Johnson & Johnson** established a CO<sub>2</sub> Reduction Capital Funding Process in 2004 with a target to make available \$40 million annually for energy and GHG reduction projects.
- **Dell** has established a similar capital fund, approved by its Facilities Steering Committee, and the company's Global Energy Management Program office selects projects and monitors carbon savings.
- **Intel, IBM and GlaxoSmithKline** also have dedicated funding streams for energy conservation projects.
- **Novartis** has set a rule that new investments or asset purchases exceeding 20,000 Swiss francs require an assessment of the energy implications.

## Addressing Energy Efficiency through Information and Communication Technology

Information and communication technology (ICT) lies at the core of both the challenges and solutions for corporate strategies to reduce operational GHG emissions. On the one hand, as demand for data centers, computer networks, mobile communications systems and other ICT technology grows, the GHG emissions associated with these technologies are rapidly increasing, expanding the carbon footprint of companies across all industries. On the other hand, ICT offers some of the most significant and promising solutions to achieving GHG emission reductions. As McKinsey & Co. succinctly put it in a recent report, "Information and communications technologies will become a major source of greenhouse gas emissions but can abate far more of them."<sup>6</sup>

Information and communication technologies currently account for roughly two percent of all GHGs emitted globally each year, and, due to increasing need for computation, data storage and communication technology, these emissions are projected to increase to three percent of all emissions by 2020.<sup>7</sup> The energy demands of increased use of ICT technology on companies are profound; the research firm Gartner estimates that large businesses now spend between 4 and 8 percent of their ICT budgets on energy, and that continued rising demand at data centers could lead to local power supply disruptions in coming years.<sup>8</sup> According to **IBM**, for every dollar spent on computer hardware, 50 cents are now spent on power and cooling needs for the hardware; the company expects this ratio will increase to 1:1 by 2012.<sup>9</sup>

But as much as ICT technology is part of the problem, it is an even more critical component to the solution. According to the Climate Group and a coalition of technology firms called Global eSustainability, the biggest potential for GHG reductions by companies—some 2 billion metric tons (MMT) of CO<sub>2</sub> annually by 2020—will come from technology solutions, such as increased use of data networking inside smart electric grids to manage energy demand and reduce unnecessary consumption.<sup>10</sup> This will be followed by more use of computers to enhance logistics of

6. Giulio Boccaletti, Markus Löffler, and Jeremy M. Oppenheim. *How IT can cut carbon emissions*. The McKinsey Quarterly. October 2008.

7. Ibid.

8. Gartner Press Release (November 7, 2006), 'Gartner says look beyond power issue as pressure mounts for 'greener' IT', <http://www.gartner.com/it/page.jsp?id=498224>.

9. *IBM 2007 Corporate Responsibility Report*, [http://www.ibm.com/ibm/responsibility/dwnlds/2007\\_CorporateCitizenshipReport.pdf](http://www.ibm.com/ibm/responsibility/dwnlds/2007_CorporateCitizenshipReport.pdf).

10. Global eSustainability Initiative and the Climate Group. *Smart 2020: enabling the low-carbon economy in the information age*. 2008.

### Possible ICT-enabled savings in emissions by 2020 (GtCO<sub>2</sub>e)

Smart grid: 2.03

Smart buildings: 1.68

Smart logistics: 1.52

Smart motors and industrial processes: 0.97

Transport optimization: 0.60

Telecommuting: 0.22

Videoconferencing: 0.14

Other: 0.66

Source: Global eSustainability Initiative and the Climate Group

transportation systems and product delivery, smarter buildings that turn off lighting and ventilation systems when they are not in use and smarter motors and more efficient industrial processes. More videoconferencing and telecommuting to reduce business travel will also play a role. As McKinsey estimates, by 2020 information and communication technologies could abate up to five times more emissions than they are estimated to generate—an amount equal to 15 percent of today's global emissions.

Not surprisingly, this study finds that a growing number of companies are beginning to look to technology solutions to reduce emissions from internal operations – and the technology firms are stepping up to the plate to meet the demand.

- **Dell** offers Energy Smart Data Center Assessment and Design services to optimize customers' data center facilities for power consumption, performance, reliability and availability. Dell also performs assessments and develops remediation plans to reduce energy use in customer HVAC and power delivery systems.
- **IBM** offers several products specific to energy management and technology. Beyond virtualization services, Active Energy Manager is a hardware/software tool that enables customers to meter and control power usage on an individual server, while Tivoli management software allows for energy management across a data center.
- **HP** also offers products to help customers reduce the energy requirements of data centers with products such as Dynamic Smart Cooling, an approach to reduce the power needed to cool data centers.
- In April 2008, **Sun Microsystems** launched the Sun Eco Advantage Program, providing partner companies tools and training to build their own eco IT practices. The program includes training on datacenter efficiency, technical assessment services, assistance in modeling investment returns and carbon savings scenarios as well as implementation methodologies.
- **Cisco** has launched several new product offerings to drive energy efficiency, including its Efficiency Assurance Program (EAP). This centralized web-based tool helps customers analyze power use and establish efficiency benchmarks across datacenter infrastructure and facilities.

Furthermore, a number of technology companies are increasing their product offerings for telecommunication and video conferencing, helping their customers to reduce the GHG emissions associated with employee business travel.

Despite recent advances in green IT technology to cut energy use and emissions, there is still much progress to be made. As noted in a recent issue of *The Economist*:

*"None of this will be easy. The IT industry can supply the hardware and software, but the bigger problem is the 'wetware' — people, economics and politics. The right skills are often scarce. Incentives are lacking for businesses to invest in carbon-reducing technology. There need to be new technical standards. For transport, power grids and buildings to become more efficient, there must be rules on how, for instance, refrigerators should talk to electric meters, and thermostats to heating systems."*<sup>11</sup>

In any case, information and communications technology will be at the center of much of this activity.

11. The Economist. *Computing Sustainability*. July 19, 2008.

## Employee Travel

Employee commuting and business travel is another major focus of company energy management programs.

- More than 100,000 **IBM** employees participate in the company's work at home and mobile employee programs. IBM estimates this saved approximately 64,000 metric tons CO<sub>2</sub> in 2007 in the US alone.
- Through **Sun Microsystems'** "Open Work" program more than 16,000 employees work from home or from a flex office a few days each week. This has allowed Sun to reduce its real estate holdings by 15 % in FY2007.
- To reduce business air travel, **Cisco** has invested more than \$20 million in TelePresence units to promote remote collaboration. The company has also committed to reducing Scope 3 emissions from air travel 10 percent by 2010 using a 2006 baseline.

Other popular programs include company subsidies to take public transit, carpooling and other alternative transport programs, and video-conferencing as a means of cutting down on business travel.

## Renewable Energy

Of course, there are limits on how much GHG savings companies can achieve through reductions in their own energy use. In order to further reduce climate change impacts, many companies have looked to renewable energy sources – both through on-site generation and the purchase of renewable energy, either directly from utilities or through credits and offsets. This study finds that a wide range of industry sectors are pursuing some kind of on-site renewable generation, ranging from solar and wind to bio-waste and fuel cells. Companies are not only investing in proven technologies, but are also putting money behind new technology development.

While some investment has been aggressive, it should also be noted that only eight of the 63 companies evaluated in this report have set actual targets for renewable energy purchases (see box below). These targets range from commitments for direct renewable energy purchase from utilities, the purchase of renewable energy certificates (RECs) or the on-site installation of solar or other renewable energy technologies. The voluntary market in RECs still faces some challenges in verifying the authenticity of credits bought and sold. In addition, it is unclear to what extent RECs will be considered for emission allowances in pending US climate legislation. Still, some companies are continuing with REC purchases as a way to demonstrate commitment.

- **Starbucks** is purchasing RECs in order to offset 20 percent of its North America retail store electricity consumption in 2007.
- In 2008 **Intel** announced it would purchase 1.3 billion kWh per year worth of RECs in a multi-year contract. The RECs will be Green-e certified by the Center for Resource Solutions. This makes Intel the largest renewable energy purchaser in the US according to the US EPA Green Power Purchase Program.

## Renewable Energy Targets

	Target	Baseline Year	Target Year	Region
<b>Applied Materials</b>	15%	—	2012	Global
<b>H&amp;M</b>	20%	—	2020	All stores
<b>Hewlett-Packard</b>	50 million kWh/year	2006	2007	United States
<b>Marriott International</b>	Install solar power	—	2017	40 hotels
<b>Pfizer</b>	35%	—	2010	Global
<b>Safeway</b>	2.5%	2005	2009	United States
<b>Starbucks</b>	50%	—	2010	All stores
<b>Wal-Mart</b>	100%	—	TBD	All stores



## Pharmaceutical Companies and their Vehicle Fleets

Pharmaceutical companies typically own or lease a large fleet of vehicles for sales and other personnel. Moreover, a typical corporate vehicle has double the miles of a family-owned vehicle.\* For three of the four pharmaceutical firms reviewed in this report, emissions from vehicle fuel use were sufficiently large that the companies set emission reduction targets for their vehicle fleets. The companies largely aim to meet their targets by increasing the numbers of hybrid or other fuel efficient vehicles in their fleets.

- **Roche** established a hybrid car initiative in 2004, when it began incorporating hybrid cars into its 1400 strong US pharmaceutical sales fleet. By 2007, the company's fleet numbered 15,630 cars globally and Roche calculated that the fleet accounted for 10 percent of its total energy consumption and 9 percent of total CO<sub>2</sub> emissions. Of these, 650 were hybrids, and 500 were part of the US sales fleet. The initiative is part of their Group Directive on energy conservation.
- **Johnson & Johnson**, as part of its Healthy Planet 2010 goals, set a target for a 30 percent reduction in emissions per kilometer driven for the company's vehicle fleet, relative to 2003. To achieve this goal, the company set minimum fuel efficiency requirements for its fleet by category, and ordered an additional 508 hybrid cars. According to Automotive Fleet Magazine, the company's current fleet of hybrid cars (978) is the largest of any corporation.
- **Novartis** set a target to reduce CO<sub>2</sub> emissions from its vehicle fleet by 10 percent by 2010 from a 2005 baseline. The company has also chosen to lease hybrid vehicles for its US fleet and diesel vehicles for its European fleet as part of its USD 23 million investment to improve the energy efficiency of its vehicle fleet.

\* Source: "In quest to go green, US firms retool car fleet," The Christian Science Monitor, June 22, 2007

Companies are also investing in on-site renewable generation across a range of technologies. While these projects still tend to make up a small portion of a company's total electricity use, they are helping to build confidence in renewable energy markets and bring down costs. Some prominent investment examples include:

- **Nike's** European distribution center in Laakdal, Belgium, which has six wind turbines. This makes the company the first of its size in Belgium to operate solely on green energy that is produced on-site.
- **Diageo** is making the largest single investment in renewable technology by a non-utility in the UK at its grain distillery in Cameronbridge, Scotland, to exploit the energy potential of waste materials, including wastewater.
- **Whole Foods** has opened a store in Glastonbury, Connecticut, that will be the first supermarket to generate most of its power on-site with an ultra-clean fuel cell from UTC Power.
- **Safeway** is currently developing approximately two dozen solar projects across California and hopes to expand its solar program to 40 stores.
- **Johnson & Johnson** has installed more than 4.1 MW of solar photovoltaic generation at ten locations in the US, making it the 2nd largest corporate user of on-site solar energy in the United States according to the World Resources Institute as of May 2008.

Other companies are funding the development of new technologies:

- **Applied Materials** has a venture capital arm which is making early round investments in companies that produce renewable or related energy products or technologies such as fuel cells, batteries and energy storage and low-cost methods of producing silicon wafers for photovoltaic systems.
- **Tesco** has established a Sustainable Technology Fund to support large-scale carbon reduction technologies for its stores, distribution centers and supply chain. The fund is solely dedicated to investment opportunities in technologies that are not yet economically viable and projects have ranged from biomass initiatives to ground source heat pumps.

In the technology sector, companies are focusing less on reducing their own operational impact through renewable energy, but instead are seizing commercial opportunities around the development of renewable energy technologies. Companies such as **IBM**, **Applied Materials**, and **Sun Microsystems** are now offering solar photovoltaic equipment and other renewable energy products.

- In 2007, **Applied Materials** created its Energy and Environmental Systems group, which will mainly develop and sell equipment to produce solar photovoltaic modules and cells. The group's focus is on thin film silicon for large-scale applications and crystalline silicon technologies intended for residential use. The group also sells equipment to produce low-emissivity and solar control architectural glass.

- In June 2008, **Hewlett-Packard** announced that Xtreme Energetics, a solar energy system developer, will license HP's transparent transistor technology designed to generate electricity at twice the efficiency and half the cost of a traditional solar panel.

Ideally, renewable energy investment would serve as one component in a range of corporate strategies to reduce operational emissions. For some companies, however, there is a trade-off between investing in on-site renewable energy or carbon offsets and pursuing energy efficiency projects. **Carrefour**, for example, says that it has reviewed on-site generation opportunities and concluded that current solar technology is not sufficiently mature to produce enough electricity for its stores. Jean-Francois Brunet, Group Assets Manager, states in the company's sustainability report: "We prefer to direct our resources toward efficient investment in the short-term and reducing our consumption rather than toward this [on-site generation] solution, which is simple to implement but less efficient for the environment. Better environmental efficiency comes from the energy we don't use." This debate will surely continue; the good news is that large energy-consuming companies are facing these tough choices and in many cases are making dramatic progress.



# Key Findings: Product Design and Promotion

Companies are beginning to extend their climate mitigation measures beyond reducing operational GHG emissions to reducing the emissions or energy consumption associated with product use and disposal. Savvy companies are capitalizing on product efficiency improvements to increase market share among customers with a strong environmental conscience or a limited pocketbook. Private labels, marketing campaigns and special price offers are some of the tactics that companies in this study hope will capture consumers' attention. Not surprisingly, product focus varies by sector with some industries reviewed in this report emphasizing products and services and others neglecting it altogether.

## Molson Coors: From Waste Stream to Revenue Stream

Molson Coors saw so much opportunity in creating saleable products from its brewing waste that it established a Co-Products division, led by Rick Paine. Paine manages the Golden, Colorado ethanol facility, operated by Coors and owned by Merrick & Company. Coors is the nation's first major brewer to convert its waste beer into ethanol. The company began recycling waste beer — beer lost during packaging or deemed below quality standards — and converting it to fuel-grade ethanol in 1996.

In 2007, Coors produced 2.7 million gallons of ethanol for sale in Denver, a 68 percent increase from 2005. The company sees a competitive advantage in that its ethanol production process does not divert raw materials from the food supply. Coors is considering the viability of expanding this business to additional production facilities.

## Product Design

The technology and semiconductor sectors are especially focused on new opportunities for designing energy efficient products for customers, including silicon chips, computers and related IT technologies. Meanwhile, personal and household goods companies are just starting to see the link between designing greener products and climate change impacts. At the other end of the spectrum, restaurants, beverages, pharmaceuticals and apparel generally have limited scope for product modification in the name of emissions reductions or energy use. Despite this, at least one company in all 11 industry sectors examined in this study either anticipates climate change related commercial product opportunities or has already taken concrete steps to achieve them.

Technology and semiconductor companies have been working for many years on designing more energy efficient products. Most companies have specialized product design teams working on environmental initiatives and are collaborating with peers and governments on developing product standards. As one example, members of the non-profit Standard Performance Evaluation Corporation (SPEC), **Dell, Intel, Hewlett-Packard, IBM and Sun Microsystems**, along with other industry partners not reviewed in this report, helped established a benchmark for server-class computers known as SPECpower, which was released in December 2007.

Other examples include:

- **Dell's** Design for Environment (DfE) program looks at energy efficiency at each stage of the product life cycle. This has led to Energy Smart, a Dell program similar to ENERGY STAR that covers many product categories. The company's latest OptiPlex desktop systems are preconfigured with the Energy Smart settings and Dell estimates that applying these settings to all of its desktops sold in the last year could avoid approximately 12.5 million tons of CO<sub>2</sub> emissions.
- **Hewlett-Packard's** Design for Environment program was established in 1992. The company has integrated energy saving features into its desktop PCs, servers and disk storage systems.
- **IBM** through its formal Product Stewardship program is working to improve product energy efficiency. New generations of hardware products have attained 14 to 73 percent improvement

in computing performance per unit of energy in 2007.

- **Intel's** desktop, mobile and server processors are now all duo and quad core processors that are more energy efficient for system throughput compared to single core processors. Intel is also working with ENERGY STAR to develop new computer energy efficiency standards and is collaborating with the European Commission and others to develop similar specifications under an EU directive.

However, technology companies are not the only ones greening their products.

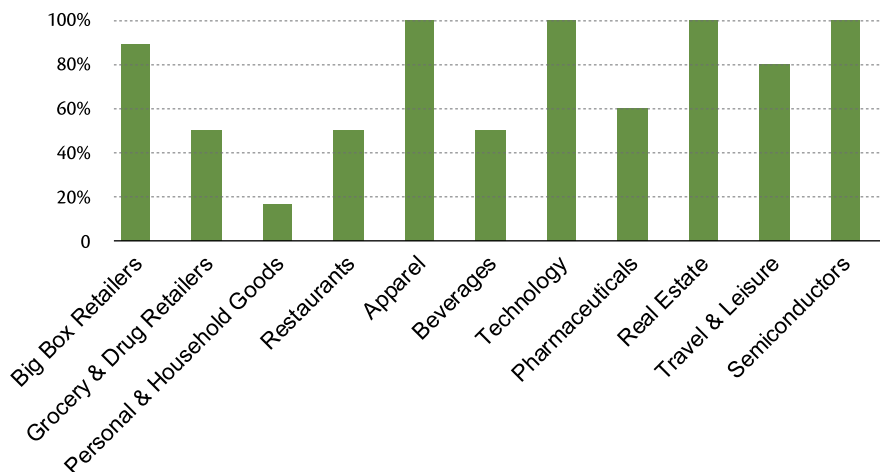
- **The Proctor & Gamble Company** has set a goal of \$20 billion in sales of “sustainable innovation products” by 2012. Such products include laundry detergents designed to be used in cool or cold water, and Braun electric shavers that feature “Smart Plugs” that use 64 percent less energy than conventional shavers. The shaver battery chargers carry the ENERGY STAR label.
- **Ecolab** has also found opportunity in laundry detergent. The company’s Formula 1 laundry program has been designed to help hotel chains reduce hot water usage by 25 percent and laundry cycle times by 12 to 18 minutes, resulting in significant energy savings. The company says its product formulations, packaging and dispensing methods are its biggest source of opportunity in helping customers reduce their climate impact.

## Product Promotion

According to a 2007 survey by consulting firm McKinsey & Co., consumers say they are very concerned about climate change and connect the issue to their own purchases. McKinsey found that out of 7,751 people surveyed in Brazil, Canada, China, France, Germany, India, the UK and the US, 87 percent of consumers worry about the environmental and social impact of the products they buy.<sup>12</sup> However, only 33 percent say they are ready to buy or have bought green products.

Why the divergence? The study found that consumers hesitate because they are unaware a specific green product exists, they are skeptical of product performance or of its green claims, it costs too much, or they cannot find it. McKinsey asserts that companies need to do more to educate consumers on eco-friendly product availability, performance and positive environmental characteristics. Prominent in-store product placement, advertisements, educational displays and clear, concise labels, such as a carbon footprint label, can all help. Companies must make green purchasing easy and ensure that they are credible.

Companies in the retail sector are reacting to these trends with big box retailers and grocers leading the way. These sectors have the opportunity to educate and attract customers as well as often flex their size power by giving preference and prominent placement to more climate-friendly products in their stores.



**Exhibit 12: Companies Developing Climate-related Products and Services**

*Companies must make green purchasing easy and ensure that they are credible.*

12. “Helping ‘green’ products grow.” Sheila M. J. Bonini and Jeremy M. Oppenheim, McKinsey & Co., October 2008.

## Reducing Emissions of Other Greenhouse Gases

While carbon dioxide is the principal GHG responsible for human contributions to climate change, some other manmade chemicals are much more potent GHGs that also contribute to the problem. These include compounds used by a wide range of industries. On a molecular basis, some of these chemicals have 20,000 times more global warming potential than carbon dioxide. Many also contribute to depletion of the Earth's ozone layer. As a result, companies are being prompted to find replacements for these chemicals under the Montreal Protocol and European regulation banning fluorinated gases, as well as pending climate change regulations.

**Apparel:** Until 2006, Nike used two potent GHGs, sulfur hexafluoride (SF<sub>6</sub>) and perfluoropropane (PFP), in its air-cushioned footwear. Through its product design program called Considered Design, Nike launched a large research and development effort, with 60 experts from more than 50 external organizations providing their expertise. Nike delivered an all-nitrogen alternative to the fluorinated gases used in its air-cushioned shoes in 2006, ahead of European regulation banning these compounds.

**Beverages and restaurants:** In 2004, Coca-Cola, McDonald's and Unilever launched an industry initiative for sustainable refrigeration known as Refrigerants Naturally. The group is working to phase out hydrofluorocarbons (HFCs) and advance the energy efficiency of refrigeration units. Coca-Cola owns more than nine million coolers and vending machines that use HFCs as a refrigerant. Depending on the specific compound, HFCs have thousands of times more potency as a GHG than carbon dioxide. That makes HFCs the largest source of GHG emissions for Coca-Cola – more than three times the emissions from manufacturing and more than five times the emissions

from the company's vehicle fleet. Coca-Cola has invested nearly \$40 million over the past eight years to identify and test alternative refrigerants. It has identified carbon dioxide as a replacement for HFCs. Although still a GHG, carbon dioxide technology should reduce refrigerant emissions by 75 percent. The company plans to deploy more than 100,000 CO<sub>2</sub> coolers by the end of 2010.

**Pharmaceuticals:** Companies like GlaxoSmithKline and Roche that produce asthma and other respiratory disease medication delivered via inhalants typically use chlorofluorocarbons (CFCs) as a propellant. CFCs are an ozone-depleting substance regulated internationally by the Montreal Protocol, but also happen to be a class of GHGs that are 4,740 to 14,400 times more potent than CO<sub>2</sub> over a 100 year span. This explains why GlaxoSmithKline's emissions associated with patient inhaler use were more than three times greater than emissions from company electricity use in 2007. Consequently, the company has set a separate product target to phase out CFC use in its inhalers by 2010.

**Semiconductors:** Semiconductor manufacturers typically use perfluorocarbons (PFCs) to maintain an ultra-clean working environment for the manufacture of wafers and chips. This potent GHG is also covered by the Kyoto Protocol. Intel and Texas Instruments have committed to reduce PFC emissions by 10 percent from a 1995 baseline by 2010 and have joined the voluntary US Environmental Protection Agency's PFC Reduction/Climate Partnership. Applied Materials and Taiwan Semiconductor Manufacturing have also set their own PFC emission reduction goals and made significant strides in this area.

- In the United States, retail giant **Wal-Mart** leads its peers in pitching climate-friendly products. For example, in 2005, it set a goal to achieve sales of 100 million compact fluorescent light bulbs through aggressive promotion and product placement efforts. As of June 2008, it had almost doubled that sales target. Wal-Mart also has goals to double sales of other energy efficient home products and to raise the efficiency of the most energy intensive products sold in its stores by at least 25 percent in three years.
- Home improvement products retailer **Home Depot** launched its Eco Options labeling program in 2007 to help customers easily identify products with a low environmental impact. Through Eco Options, Home Depot promotes a number of ENERGY STAR labeled appliances, lights and windows as well as Forest Stewardship Council certified wood products. The company has introduced a label for nearly 3,000 products but expects this number to grow to 6,000 products by 2009. An Eco Options website provides consumers with an ongoing count of the number of products sold, electricity saved and carbon dioxide emissions prevented.

## Carbon Footprint Assessment for Products and Services

To facilitate green purchasing, consumers need to know that eco-friendly product claims can be trusted. The UK government decided to help.

The UK's Department of Environment, Food and Rural Affairs (Defra) and the Carbon Trust sponsored the development of a universally applicable standard for measuring the carbon footprint of a product or service to address public confusion over carbon footprints and to establish a credible standard. The standard, called Publically Available Specification (PAS) 2050, was developed by the British Standards Institute in a multi-stakeholder process and released in October, 2008. It sets detailed guidelines for calculating life cycle greenhouse gas emissions for any product or service including raw material extraction and modification, manufacturing, waste production, direct land use change, transport, storage, end use and disposal.

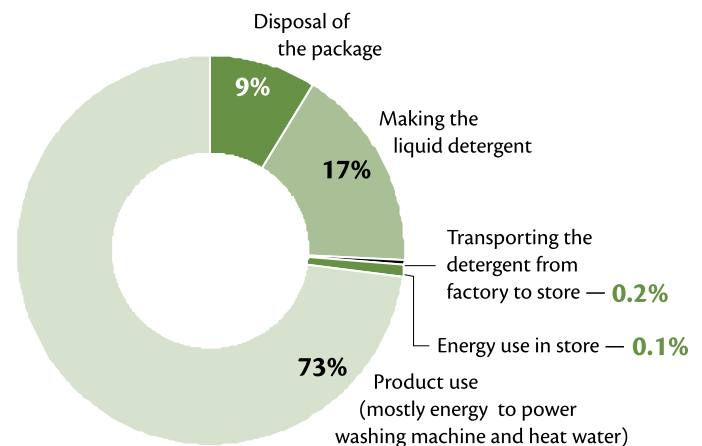
Use of the standard is voluntary but companies that profess to apply PAS 2050 must meet its requirements for setting system boundaries, data quality and the use of primary or secondary data, and for transparency. The result must be expressed in CO<sub>2</sub>e per unit of product or service, but there are no further requirements on how to communicate the results of the assessment or the format of a label. The results are valid for two years.

PAS 2050 includes all six GHGs regulated under the Kyoto Protocol and it can be used by organizations and businesses of all types and sizes. Organizations that provide a product or service to an end user assess cradle-to-grave emissions from raw materials to use and disposal. Organizations that supply the product or service to an intermediate organization can measure emissions up to the point it delivers the product or service to another organization, known as cradle-to-gate.

Embodied GHG emissions are differentiated by life cycle and use phase. PAS 2050 requires that all emissions that may materially contribute to embodied GHG emissions must be included. In addition, at least 95 percent of the emissions for both the life cycle and use phases must be included, but if not all emissions are measured, emissions must be scaled up to represent 100 percent of embodied emissions.

The system boundary and function unit for analysis will differ by product; however the standard can be universally applied. The standard is very detailed. For instance, emissions from the use of capital goods such as machinery in producing a product are included, but the emissions from the production of that machine are not. Emissions from direct land modification such as chopping down trees are included; emissions from indirect land use change such as soil tilling are not. Emissions from consumer product use are included; emissions from consumer transport to the store to buy the product or use the service are not. GHG offset mechanisms may not be used to decrease embodied emissions.

- In the United Kingdom, grocery retailer **Tesco** has worked with the Carbon Trust and utilized the PAS 2050 standard (see box above) to provide customers with information on embedded product emissions via a full carbon footprint label. The company started with a pilot project for 20 products sold in its UK stores, including potatoes, orange juice, washing detergent and light bulbs. Now Tesco intends to expand the labeling program to other products and collect information on how its customers are using the information. Tesco also identifies products shipped by air with a "By Air" sticker. It has set and achieved a goal to have air shipped items comprise less than 1 percent of its total grocery stock. Tesco also set a target to sell 10 million energy efficient light bulbs in a year. The company slashed prices by half to attract customers, which led to a quadrupling of sales and attainment of its target.



**Exhibit 13: Carbon Footprinting:  
Tesco Laundry Detergent**

Based on 1.5-liter bottle (about 1.5 quarts) of Tesco non-biological liquid wash, 20 loads per bottle and 9.9 pounds of laundry per load.

Source: Ball, Jeffrey. "Six Products, Six Carbon Footprints." *The Wall Street Journal*: October 6, 2008

# Key Findings: Supply Chain Management

*McKinsey & Co. estimates that consumer goods companies have between 40 and 60 percent of their total carbon footprint embedded in their upstream supply chain—including everything from raw materials and energy use to transport and packaging; for retailers, the figure is closer to 80 percent.*

The majority of companies evaluated in this study are reporting their Scope 1 and 2 emissions, upgrading the energy efficiency of their stores and offices, and/or taking greater advantage of renewable energy options. But as companies look to expand their efforts into new areas of emission reductions, they are increasingly recognizing that supply chain emissions present a major opportunity to reduce carbon exposure.

For most large companies, the supply chain comprises the largest slice of their overall carbon footprint. McKinsey & Co. estimates that consumer goods companies have between 40 and 60 percent of their total carbon footprint embedded in their upstream supply chain—including everything from raw materials and energy use to transport and packaging; for retailers, the figure is closer to 80 percent. In a survey of 2,000 global executives conducted by McKinsey, more than half said they now recognize the importance of managing their supply chain’s carbon emissions, although fewer than a quarter have implemented formal response strategies.<sup>13</sup>

These findings point to the hurdles that companies still face in integrating emissions reductions into supply chain management (SCM). As IBM notes in a recent study on carbon management in the supply chain, reducing supply chain emissions requires a “holistic perspective” that involves reassessment of a number of options, including distribution, transportation, components, inventory, design and packaging.<sup>14</sup> Compounding the challenge, there is no established international protocol for calculating supply chain emissions.

Despite these obstacles, this study finds that a growing number of companies are taking actions to reduce their overall carbon footprint. Roughly a third of the evaluated companies are taking some steps to shift to a lower-carbon supply chain. In addition, leading companies are demonstrating some of the tools needed for successful supply chain management. These include:

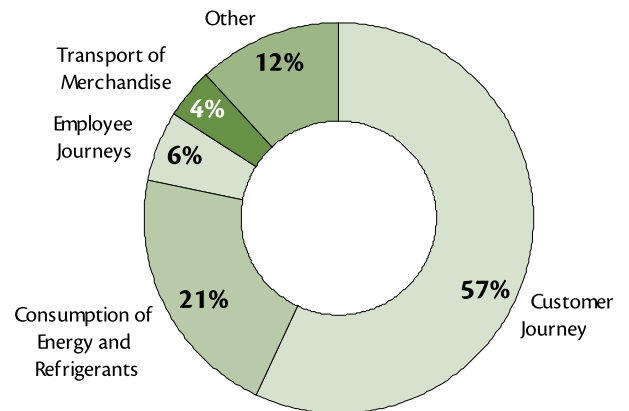
- Using product life cycle analyses (LCAs) to measure GHG emissions across the supply chain;
- Re-setting supplier standards and supplier engagement tactics to directly address energy efficiency and other climate-related issues;
- Adjusting distribution and other logistics processes to maximize efficiencies.

As IBM concludes in its report, “Incorporating carbon reduction into [a company’s] overall SCM strategy... can help reduce [its carbon] emissions footprint, strengthen their brand image and develop competitive advantage... Reducing the supply chain’s carbon footprint will become an inescapable obligation.”<sup>15</sup>

<sup>13</sup>. Chris Brickman and Drew Ungerman. *Climate Change and Supply Chain Management*. July 2008. The McKinsey Quarterly.

<sup>14</sup>. IBM. *Mastering Carbon Management*. 2008. IBM Global Services: Somers, NY.

<sup>15</sup>. IBM. *Mastering Carbon Management*. 2008. IBM Global Services: Somers, NY.



**Exhibit 14: Supply Chain GHG Emissions: Carrefour's Chambourcy Hypermarket**

Source: Carrefour Group 2007 Sustainability Report



## Setting the Standard

If measuring basic Scope 3 emissions remains a challenge, it will be harder still to measure GHG emissions throughout the entire supply chain—upstream as well as downstream. In both regards, the need to establish a consistent reporting methodology is paramount. The World Resources Institute and the World Business Council on Sustainable Development, which created the international emissions accounting standard known as the GHG Protocol, recently stated that “a broad assessment of the full climate impact of corporate activities has great potential to enable new GHG reductions throughout corporate supply chains worldwide.” In light of this finding, they launched an initiative in 2008 to develop further guidelines for measuring and reporting GHG emissions across corporate and product supply chains.

*If measuring basic Scope 3 emissions remains a challenge, it will be harder still to measure GHG emissions throughout the entire supply chain—upstream as well as downstream.*

But as international organizations work to develop such a global standard, many companies have taken matters into their own hands. These companies have taken leadership roles in collaborating to develop sector-specific standards for conducting product lifecycle analyses and measuring the carbon impact upstream and downstream of their products.

- In the beverage sector, **Coca-Cola** has undertaken a variety of actions to measure the carbon footprint of its supply chain. In September 2007, it joined eight other companies—including Coors Brewers of **Molson Coors**—to implement a draft product carbon footprinting tool known as PAS 2050, which was developed by the Carbon Trust, Defra, and the British Standards Institute (see sidebar on Carbon Footprint Assessment, pg 40). The companies agreed to use the tool to calculate the lifecycle carbon emissions of several products. In addition, **Molson Coors** is working with the Beverage Industry Roundtable to define boundaries and methodologies for calculating lifecycle GHG emissions specific to the beverage industry.
- In the technology sector, companies such as **Dell**, **Hewlett-Packard** and **IBM** (as well as **Applied Materials** from the semiconductor sector) are working through the Electronic Industry Citizenship Coalition (EICC) to develop a common approach for the electronics industry to measure emissions in the supply chain.

In addition to their collaboration with the EICC, **Hewlett-Packard** and **IBM** have developed internal and client-focused tools to measure supply chain emissions, making supply chain management a central focus of their climate change strategies.

- **Hewlett-Packard** announced in September 2008 that it has collected emissions data associated with all of its largest suppliers, which represents more than 80 percent of the company’s cost for materials, manufacturing and assembly of its products worldwide. HP is the first major technology company to achieve this goal.
- **IBM** has developed a new supply chain carbon analysis tool, the Carbon Tradeoff Modeler, which allows companies to tweak their operations and see how changes to packaging, transportation and inventory would affect their carbon footprints. The tool helps companies evaluate tradeoffs in supply chain decisions between GHG emissions reductions and other factors such as on-time delivery or high inventory levels.



## Engaging with Suppliers

Measuring GHG emissions in the supply chain is just the start. While there are many steps companies can take to cut supply chain emissions, they cannot do everything alone. As with all supply chain management initiatives, suppliers themselves must play an active role in achieving effective emission reductions and supplier engagement is critical. As McKinsey & Company notes in a recent study, “Top companies regard climate change as an opportunity to get closer to suppliers—effectively reducing both costs and carbon in their supply chains.”<sup>16</sup>

*Engaging with suppliers offers companies the opportunity to form closer relationships and better manage reputation risk across a range of issues.*

Many of the companies analyzed in this study are making strides in managing their supply chain emissions by sharing knowledge with suppliers on how to achieve further GHG emission reductions. Altogether, 14 of the companies have set environmental standards for their suppliers. Of these companies, nine have integrated climate-specific factors, such as energy efficiency and GHG emissions reporting, into their supplier standard policies.

- **Dell** has set expectations for its suppliers to manage, improve and report publicly on their GHG emissions as a consideration for awarding business. In addition, the company has set business requirements for its Tier 1 suppliers to publicly disclose their GHG emissions during Quarterly Business Reviews. In 2007, Dell hosted an Asia Climate Impact Supplier Summit in Taipei to educate its suppliers on the company’s climate change strategies.
- **H&M** has set specific requirements for all suppliers to meet minimum emissions standards for road transport. In addition, the company requires that 75 percent of all drivers must have received theoretical and practical training in fuel-efficient driving.
- **Taiwan Semiconductor Manufacturing** announced in 2008 that it would require all key suppliers to conduct a GHG emissions inventory and implement GHG emissions reduction measures.
- **adidas** surveyed its suppliers on their environmental priorities in 2005. After determining that energy consumption was a major concern among suppliers, the company held a series of energy efficiency training workshops in 2007 for more than 100 suppliers in China and Vietnam.
- **Nike** is performing audits of its key footwear manufacturing factories – also located mainly in Vietnam and China—to identify energy-intensive processes and potential areas of savings.
- **Applied Materials** has added factors such as energy usage, energy efficient products, and carbon inventories to its existing supplier scorecards to evaluate suppliers on their climate change performance.
- Similarly, **McDonald’s** uses a Supplier Quality Index to evaluate its suppliers. The company recently included guidelines related to energy efficiency and renewable energy to these evaluation parameters.

**Supply Chain Leadership Collaboration:** In September 2007, **Wal-Mart** announced that it was partnering with the Carbon Disclosure Project to launch a pilot program of the CDP Corporate Supply Chain Programme. The retail giant announced that it would use the CDP survey methodology to engage its suppliers on a range of climate change-related issues, focusing initially on seven of its main supply sectors. (See box on Wal-Mart for further details.) Growing out of this announcement has been the formation of a CDP Supply Chain Leadership Collaboration, now heading into its second year, which has been pivotal in driving corporate engagement with suppliers on climate change. Of the companies evaluated in this study, 10 have joined the initiative: **Tesco, Procter & Gamble, Colgate-Palmolive,**

16. Chris Brickman and Drew Ungerman. *Climate Change and Supply Chain Management*. July 2008. The McKinsey Quarterly.

**Carrefour, Wal-Mart, Hewlett-Packard, Dell, IBM, Johnson & Johnson and L’Oreal.** In addition to Wal-Mart, both Tesco and Procter & Gamble were founding members of this program.

## Logistics/Distribution

While suppliers are hugely important, the changes companies make to their own logistics systems are also critical in the shift to a low-carbon supply chain. Procedural changes such as shipment consolidation, localized sourcing, employment of alternative information sources and network optimization can all significantly reduce a company’s carbon footprint. Just under a third of the companies in this study have made system-wide improvements to their logistics to reduce GHG emissions. An additional six companies have made minor changes to reduce the GHG emissions associated with their logistics systems. Companies in the **grocery and drug retailers, big box retailers and technology** sectors have on average done the most to make system-wide improvements to their logistics and distribution processes in order to reduce GHG emissions.

**Focus on transportation:** For companies operating their own truck fleets, much of the opportunity to reduce embedded GHG emissions in their supply chain rests on fleet efficiency upgrades and use of alternative fuels. **Whole Foods**, for example, is converting its entire truck fleet to bio-diesel fuels and retrofitting vehicles with aerodynamic aprons to cut down on wind resistance and lower fuel consumption. Roughly half of Whole Foods’ distribution centers use trucks that run on bio-diesel fuel.

Other companies have made significant strides in reducing the number of miles traveled by distribution fleets through shipment and warehouse consolidation, more efficient routing and encouragement of pooling among their suppliers.

- **Carrefour** is actively working with its suppliers to reduce the number of “empty kilometers” traveled by promoting pooling among suppliers for warehouse deliveries and using consolidation warehouses where goods are delivered by suppliers and then re-distributed by Carrefour in fully-loaded trucks.
- **CVS** decreased the total miles driven by its fleet 2.2 percent in 2007 through efficiency improvements in its distribution centers, despite a rise in the number of products transported. For example, the company’s logistics group consolidated its distribution centers into one location for its core stores in Arizona, Nevada and California, improving the efficiency of its distribution system in the region.
- In 2008 **Best Buy** made improvements to its logistics operations, decreasing the number of trucks on the road and eliminating over 18,000 trips for its transportation vendors.

## Focus on Wal-Mart

While a number of companies in this study have taken steps to work with suppliers in implementing emissions reduction strategies, most have employed one—or at most a couple—supplier engagement strategies, such as conducting trainings, developing supplier scorecards or auditing suppliers’ operations. Wal-Mart, however, has done all three of these things.

In January 2008, Wal-Mart CEO Lee Scott announced his company’s commitment to build the “Supply Chain of the Future.” This announcement followed Wal-Mart’s agreement with the Carbon Disclosure Project in September 2007 to measure the energy use and emissions of the entire supply chain of seven product categories, including beer, DVDs, milk, soap, soda, toothpaste and vacuum cleaners. The company plans to use this information to develop energy efficiency and emissions management strategies for the supply chain of these products. In addition, Wal-Mart has announced its commitment to develop supplier scorecards to evaluate the carbon footprint of its suppliers and products.

In addition, Wal-Mart has implemented a Supplier Energy Efficiency Program through which the company conducts energy efficiency audits and retrofits of participating suppliers’ buildings. The purpose of the program is to facilitate information sharing between Wal-Mart and its suppliers, giving suppliers the opportunity to learn from Wal-Mart’s own experiences in lowering its energy consumption in its vast array of stores and warehouses.

In October 2008, Wal-Mart launched a China-focused supplier engagement program, called the China Initiative. The company convened 900 leading suppliers, Chinese officials and other key stakeholders for a Sustainability Summit in Beijing to launch the initiative. Wal-Mart is developing metrics by which to measure the progress of its Chinese suppliers on integrating climate change and other environmental and social considerations into their business.

As the largest retailer in the world, much of Wal-Mart’s climate impact lies in its massive global supply chain. The company has made many steps in the right direction towards addressing the GHG emissions associated with its supply chain; the true test will be whether these initiatives are carried through to result in effective supply chain management practices and measurable GHG emissions reductions.

## Examples of Company Best Practices: Moving to a Low-Carbon Supply Chain

Logistics	<ul style="list-style-type: none"> <li>• Warehouse consolidation</li> <li>• Truck fleet efficiency upgrades</li> <li>• Alternative transport</li> <li>• Supplier pooling</li> <li>• Minimization of “empty miles” (co-deliveries, backhauling, etc.)</li> <li>• Shipment consolidation</li> <li>• Minimization of employee and customer travel – store locations</li> <li>• Local sourcing</li> <li>• Inventory management</li> </ul>
Materials/Packaging	<ul style="list-style-type: none"> <li>• Packaging reduction</li> <li>• Material replacement</li> <li>• Returnable/reusable packaging</li> <li>• Product carbon labeling</li> <li>• Product life cycle assessment</li> </ul>
Supplier Engagement	<ul style="list-style-type: none"> <li>• Supplier trainings</li> <li>• Supplier standards or scorecards</li> <li>• Mandatory GHG emissions reporting</li> <li>• Supplier collaborative programs</li> <li>• Factory energy audits</li> </ul>

A number of companies have also committed to using alternative methods of transportation, such as by waterway or rail, to reduce emissions. **Canon** reports that in 2007 the company was able to reduce CO<sub>2</sub> emissions by 3,840 tons by shifting to rail transport in Japan. **Carrefour** has set a goal to transport 40 percent of its import flows in France by waterway or rail.

Clearly, GHG emissions management across the supply chain will play an increasingly important role in corporate climate change strategies going forward. Engaging with suppliers offers companies the opportunity to form closer relationships and better manage reputation risk across a range of issues. Transforming transportation and logistics systems offer companies the chance to find significant cost savings, particularly during a period of volatile fuel prices. Companies are also looking closely at the raw materials that make up their products as well as packaging materials to reduce embedded emissions and shipping weight, which in turn lowers fuel use and emissions.

There is much more that can be done in this area. Collaboration within and across industry sectors on supply chain emissions measurement standards and supplier engagement programs will be critical. This study also finds that the leadership of a few companies can quickly spur others into action.

Overall, the consumer and technology companies examined in this report are realizing that effective energy and GHG emissions management is now fundamental to sound business policy, no matter what sectors or regions they operate in. Companies with consumer-facing products and services are beginning to take actions to mitigate climate risks and seize related commercial opportunities, but much more needs to be done to strengthen governance of climate change issues, set and meet aggressive emission reduction targets and transform business models to address the realities of a carbon-constrained world.

# Appendix I: Company Profile Key

---

*Please see the next section for a sample company profile.*

All 63 company profiles can be accessed online at: [www.ceres.org/publications](http://www.ceres.org/publications)

## **Board Oversight (Total possible points: 12)**

**Board Committee/Member:** Names board-level committee or member with explicit oversight of company's climate change response strategies.

**Board Role:** Describes Board of Director's role in developing, approving and/or monitoring the company's climate change response strategies.

**Board Training:** Describes if the Board of Directors has received training and education addressing climate change and/or sustainability issues.

## **Management Execution (Total possible points: 20)**

**CEO Leadership:** Describes CEO's role in the company's climate change response strategies, including possible public statements, involvement in policy development and external initiatives.

**Company Strategy:** Describes overall company strategy to address climate change risks and opportunities, including any published environment or climate-specific internal policy statements.

**Executive Responsibility:** Describes management structure and delineation of responsibility to execute climate change response. Include names and titles of key executives with climate change responsibility.

**External Initiatives:** Describes company participation in external coalitions, working groups or initiatives to mobilize action on climate change.

**Employee Training:** Describes training and education for employees on climate change and/or sustainability issues.

**Executive Compensation:** Describes criteria used to link executive officer compensation to attainment of environmental and/or climate-related goals.

## **Public Disclosure (Total possible points: 14)**

**Annual Report:** Summarizes discussion of climate change risks, opportunities and initiatives in most recent Annual Report.

**Securities Filings:** Summarizes discussion of material climate change risks and opportunities in Form 10-K, 20-F or equivalent securities filings.

**Other Disclosure:** Summarizes disclosure of climate change risks, opportunities and initiatives in sustainability report and/or on website.

**Carbon Disclosure Project:** Indicates whether company has publicly answered the most recent Carbon Disclosure Project (CDP) questionnaire. CDP is a nonprofit organization that conducts an annual climate change survey on behalf of institutional investors.

**CDP6 Risk Disclosure:** Summarizes assessment of climate change-related physical, regulatory, material and/or other risks in CDP6 response.

**Public Policy:** Describes support for climate change regulatory proposals and related public policy measures.

## Emissions Accounting (Total possible points: 16)

**GHG Emissions Inventory:** Outlines most recent inventory of greenhouse gas (GHG) emissions from company operations and supply chain. Provides year, facility/region covered and reporting protocol used.

*Scope 1:* Direct GHG emissions from combustion in company-owned or controlled sources (boilers, furnaces, vehicles, etc.)

*Scope 2:* Indirect GHG emissions from generation of electricity purchased for use by company facilities.

*Scope 3:* Other indirect GHG emissions from company activities (e.g., employee commuter travel; business travel by air, rail or motor vehicles; other indirect emissions from product use or supply chain).

**Accounting Methods:** Describes accounting methods used for GHG emissions inventory.

**External Verification:** Describes third-party audit and/or verification of GHG emissions data.

**Certified CO<sub>2</sub> Offsets:** Describes purchase of certified carbon offsets/credits to offset company emissions.

## Strategic Planning (Total possible points: 38)

**Emissions Reduction Targets:** Outlines targets set by company to reduce GHG emissions or related energy use. Includes breakdown of total emission, energy efficiency and renewable energy targets, as applicable.

**Target Details:** Includes any additional information on target schedules or scope, as well as more specific targets relevant only to certain business lines or regions of operation.

**Target Achievement:** Describes if company has achieved a previous emissions target and/or quantified progress toward achievement of current target.

**Energy Efficiency:** Describes measures taken to improve energy efficiency of company's own operations. Any energy efficiency measures related specifically to products (including property portfolios for real estate developers) is included in the section below, Products & Services.

**Renewable Energy:** Describes purchases of renewable energy for company operations, on-site generation of renewable energy and/or investment in renewable energy technology development.

**Emissions Trading:** Describes engagement in voluntary or mandatory GHG emissions trading programs to offset company's GHG emissions.

**Products and Services:** Describes pursuit of strategic business opportunities associated with climate change, including measures to reduce emissions associated with products/services, marketing of these products/services and development of new products/services.

**Research & Development:** Describes investment in research & development for low-carbon products, technologies or services.

**Supply Chain Management:** Describes measures taken to reduce emissions associated with company's supply chain, including: a) supplier engagement; b) material replacement/packaging reduction; c) logistics improvements.



# Appendix II. Sample Company Profile

## INTERNATIONAL BUSINESS MACHINES CORP.

NEW YORK STOCK EXCHANGE – IBM  
Technology

IBM has had a long track record of environmental protection, reporting publicly on the company's impact and innovating to find new solutions for customers, particularly in the area of energy efficiency. The company has already met a suite of first generation greenhouse gas (GHG) emission reduction and energy conservation targets and has announced a set of new targets through 2012. Of particular note are IBM's innovations in product development – from data centers to microprocessors – but also the company's research collaborations on issues ranging from traffic congestion pricing systems to solar cell technology.

**Summary Score: 79**

### Company Information

International Business Machines (IBM) is the world's largest provider of computer products and services. The company makes mainframes and servers, storage systems and peripherals. In addition, IBM's growing services business now accounts for more than half of its sales. Its IT services arm is the largest in the world and the company is also one of the largest providers of both software and semiconductors. The company had approximately 420,000 employees as of December 2007.

#### Contact Information

**Chairman/CEO:** Samuel J. Palmisano

**Website:** www.ibm.com

**Address:** New Orchard Rd., Armonk, NY 10504, United States

### Board Oversight

**Score: 8**

#### Board Committee/Member

Directors and Corporate Governance Committee

#### Board Role

IBM's Directors and Corporate Governance Committee, formed in 1993, is responsible for reviewing the company's policies and practices on corporate public responsibility, including protection of the environment. This committee reviews IBM's energy conservation and climate protection goals and performance annually. In addition, the entire Board of Directors receives a report on energy and climate goals and performance annually.

#### Board Training

None identified.

### Management Execution

**Score: 17**

#### CEO Leadership

CEO Samuel Palmisano agreed to invest in the company's "Project Big Green" initiative (discussed below in Products & Services), following an online brainstorming session in November 2006 that included thousands of employees, business and university partners.

#### Company Strategy

IBM established its first corporate policy on environmental protection in 1971. The company has a comprehensive global environmental management system that governs IBM's operations worldwide, as well as specific programs and goals on energy conservation and climate protection. The company's 2006 *Environmental Report* states, "IBM has applied its technical and engineering expertise to voluntarily reduce emissions associated with its own operations and to help its clients by creating products and offering solutions that are increasingly energy efficient."



## INTERNATIONAL BUSINESS MACHINES CORP.

IBM's "carbon management hierarchy" starts with energy efficiency and resource conservation efforts, followed by the use of renewable, low CO<sub>2</sub>-emitting energy sources and the use of abatement technology to manage PFC emissions. A similar focus on energy efficiency is found across the company's product design efforts. In addition, in 2006, IBM updated its corporate-wide energy conservation goal, decoupling the measurements for energy conservation from renewable energy sourcing.

### *Executive Responsibility*

IBM's Corporate Environmental Affairs staff has responsibility for setting the company's overall environmental strategy and goals, including those for energy conservation and climate protection. IBM's Vice President, Corporate Environmental Affairs & Product Safety reviews the company's strategy, goals and performance with the Directors and Corporate Governance Committee of IBM's Board of Directors annually. Additionally, within operating units, IBM employees serve as team leaders for environmental affairs and all product design and development groups have an assigned employee to manage integration of product stewardship and environmental considerations.

### *External Initiatives*

IBM has been a member of the Business Environmental Leadership Council of the Pew Center on Global Climate Change since 2000. The company is also a charter member of the WRI Green Power Market Development Group, World Wildlife Fund's Climate Savers Program, US EPA Climate Leaders program, the Chicago Climate Exchange, and participates in the EPA Green Power Partnership and SmartWay Transport Partnership programs. IBM is also a founding member of the Green Grid and in April 2007 established the Intelligent Utility Network Coalition to accelerate the adoption of systems for monitoring and managing electric grids. Finally, the company has formed with The Nature Conservancy the Great Rivers Partnership, which will produce a new computer-modeling framework for major river basins around the world, also enlightening climate change adaptation considerations.

In January 2008, IBM also announced it was joining with the World Business Council for Sustainable Development and other companies to establish Eco-Patent Commons. The initiative will make public a suite of patents focused on innovations in environmental protection in manufacturing and business processes, including energy efficiency and pollution prevention technologies.

### *Employee Training*

IBM recently held an internal *Innovation that Matters* video contest for which employees submitted videos related to energy and environment practices with clients, at work and in their homes.

### *Executive Compensation*

IBM employees who have responsibility for the company's energy conservation and climate protection programs have the attainment of energy and GHG goals included as part of what IBM calls their "personal business commitments" and in their annual performance evaluations. These performance evaluations are used to determine both annual salary increases and bonus pay.

In addition, IBM has an IBM Chairman's Environmental Award recognition program, which it established in 1991. The purpose of this annual award is to encourage environmental leadership and strengthen integration of environmental affairs throughout IBM's business. In 2006, the program was modified to focus solely on energy conservation, energy efficiency and climate goals in IBM's operations, products and services. IBM's Chairman presented the 2007 award to the company's Systems & Technology Group.

# INTERNATIONAL BUSINESS MACHINES CORP.

## Public Disclosure

Score: 8

*Annual Report* In the introduction to IBM's 2007 Annual Report, the company mentions its green data center and energy efficiency solutions as a differentiator for the company in terms of infrastructure leadership.

*Securities Filings* In IBM's 2007 Form 10-K the company lists the following as Innovation Initiatives: "the design of smaller, faster and energy-efficient semiconductor devices; systems virtualization, Green Data Centers and the design of 'grid' computing networks that allow computers to share processing power."

*Other Disclosure* IBM has been producing an annual "IBM and the Environment Report" since 1990, including information on energy conservation and climate protection programs and performance. Similar information is also included in the company's annual corporate responsibility report and on IBM's Energy & Environment website ([www.ibm.com/ibm/environment](http://www.ibm.com/ibm/environment)).

**Sustainability Report:** 2007 Corporate Responsibility Report, December 2007

**URL:** [http://www.ibm.com/ibm/environment/annual/IBM\\_CorpResp\\_2006.pdf](http://www.ibm.com/ibm/environment/annual/IBM_CorpResp_2006.pdf)

**GRI Accordance:** G3 – A Self Declared

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* IBM expects to be less affected by GHG regulations compared to other companies and industries. The company mentions the EU 20/20 energy efficiency objective and the Australia Energy Efficiency Law as examples of regulations that may affect the cost and availability of energy for IBM's operations and supply chain. On the other hand, the company does not see itself exposed to any "unusual physical risks" due to climate change. One area that could be impacted is the company's semiconductor manufacturing, which is water intensive; however, the company has implemented water conservation programs.

*Public Policy* IBM says it does not engage directly in advocating for particular regulatory schemes on climate change, given the nature of its business and relative low exposure to GHG control measures compared to other industries. Instead, IBM says in its most recent Carbon Disclosure Project response that the company believes it "can best contribute by taking actions to demonstrate the feasibility and benefits of increasing efficiency, reducing emissions, and designing energy efficient products." The company shares its best practices in these areas with other companies, NGOs and policymakers.

# INTERNATIONAL BUSINESS MACHINES CORP.

## Emissions Accounting

Score: 11

GHG Emissions Inventory    Year: 2007    Facility/Region: Global    Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	599,470
Scope 2 (Indirect –Electricity)	2,265,648
Scope 3*	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

\* While IBM has business travel, logistics, products and supply chain programs in place to reduce GHG emissions, the company has not specifically quantified any Scope 3 emissions to date.

*Accounting Methods*    IBM's emissions inventory applies to all facilities owned and leased globally which support operations. The company uses the GHG Protocol and the US EPA Climate Leaders GHG Inventory Guidance. Factors for PFC global warming potentials are taken from the IPCC 2nd assessment protocol.

*External Verification*    IBM's emissions inventories are audited three ways: 1) by FINRA (formerly NASD) under participation in the Chicago Climate Exchange (Canada, Mexico and the US), 2) by the US EPA Climate Leaders program (Global), and 3) by Bureau Veritas Certification as part of IBM's ISO 14001 global facility audits.

*Certified CO<sub>2</sub> Offsets*    None identified.

## Strategic Planning

Score: 35

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Absolute)	12%	2005	2012	Global
Energy Use	3.5% in savings	—	Annual	Global

*Target Details*    IBM has set a number of second generation GHG emission reduction goals after surpassing its original goal. The company's main goal is to reduce CO<sub>2</sub> emissions associated with energy use by 12 percent between 2005 and 2012. Other goals include:

- Reduce PFC emissions, which are potent greenhouse gases, from semiconductor manufacturing 25 percent by 2010 against a base year of 1995, consistent with that of the World Semiconductor Council goal. This is a second generation goal after the company met a goal in 2002 to reduce PFC emissions by 40 percent also against a 1995 baseline.
- As part of the US EPA Climate Leaders (Phase II) goal, reduce total global GHG emissions by 7 percent from 2005 to 2012.
- As part of the Chicago Climate Exchange Phase II program, reduce CO<sub>2</sub> and PFC emissions in North America by 6 percent by 2010 as measured against the annual average direct and indirect emissions for the period of 1998 to 2001.

In addition, IBM has set a goal to complete energy conservation projects that would save, on an annual basis, the equivalent of 3.5 percent of that year's energy usage by the company. This goal had been in place since 1996 and was updated for 2007; it also only recognizes real reductions and not downsizings or cost avoidance actions, such as fuel switching and off-peak load shifting. The company's semiconductor manufacturing operations have also established annual water conservation targets.

## *Target Achievement*

Between 1990 and 2005, IBM reduced or avoided CO<sub>2</sub> emissions by an amount equivalent to 40 percent of its 1990 emissions through its global energy conservation program. The company also achieved its initial US EPA Climate Leaders goal by reducing total global energy-related GHG emissions by an average of 6 percent per year and PFC emissions by 58 percent from 2000 to 2005. However, between 2006 and 2007 IBM's net CO<sub>2</sub> emissions increased by 5 percent as a result of business growth. Against the 2005 base year, IBM has increased its CO<sub>2</sub> emissions by 1.7 percent to date.

## *Energy Efficiency*

IBM's energy management team is responsible for driving energy efficiency initiatives across the company's operations. Energy conservation efforts saved \$19.3 million in 2007 while conserving energy equal to 3.8 percent of total consumption versus the corporate goal of 3.5 percent. These projects avoided approximately 77,000 metric tonnes of CO<sub>2</sub>e. In 2006, energy conservation projects reduced or avoided 3.9 percent of consumption, saving \$18.6 million and avoiding 98,000 metric tonnes of CO<sub>2</sub>e. Over the longer term, from 1990 to 2007 energy conservation projects at IBM cumulatively reduced or avoided 10.4 million metric tons of CO<sub>2</sub> emissions and saved approximately \$1 billion.

Key energy efficiency initiatives in 2007 include:

- Establishing global best practices teams and checklists for lighting, HVAC, Central Utility Plant, and data center systems. Based on the checklist analysis, IBM committed \$9 million, in each of 2007 and 2008, of dedicated capital to identified energy conservation projects.
- Expanding its re-commissioning program for existing facility building management systems. From 2003 to 2006, IBM re-commissioned 2.6 million square feet of space, achieving annual savings of 17,000 MWh and \$917,000. In 2007, an additional eight locations were evaluated and 25 new sites will be evaluated in 2008.
- Performing thermal profiling and assessment using the IBM-developed Mobile Monitoring Technology (MMT) at three data centers in the US and Canada. These assessments identified opportunities for over 0.6 MW (6 percent capacity reduction) demand reduction and a corresponding usage reduction of over 5500 MWh per year (11 percent use reduction).

For the company's own data centers, the IBM technology delivery team also announced plans to double their computing capacity within the next three years without increasing power consumption or their carbon footprint. Compared to doubling the size of its data centers by building out new space, IBM expects this will help save more than five billion kWh of energy per year. IBM will also consolidate about 3,900 computer servers onto about 30 System z mainframes running the Linux operating system, which is expected to reduce energy consumption by approximately 80 percent.

IBM also has several programs in place to reduce employee travel. Over 100,000 employees participate in the company's work at home and mobile employee programs. In the US alone, IBM estimates that its work at home program avoided approximately 64,000 metric tons CO<sub>2</sub> in 2007. Globally, the company also provides support for the use of public transit, alternative transport and high mileage leased vehicles. Finally, IBM uses several IT collaboration tools, such as web and video conferencing, to reduce employee business travel. IBM has received numerous awards dating back to 1998 from the US EPA and others for its energy efficiency and climate protection efforts.

*Renewable Energy* IBM is a charter member of the WRI Green Power Market Development Group and through this group purchased over 96,000 MWh of Renewable Energy Certificates (RECs) in the US in 2006 and 2007. The company ranked 12th on the US EPA's Fortune 500 list of Green Power Partners for 2007. The company also reports in its most recent Carbon Disclosure Project response that global purchases of renewable energy grew by 24 percent between 2006 and 2007, increasing from 368,000 MWh to 455,000 MWh. These purchases represented 8.5 percent of the company's 2007 global electricity use.

*Emissions Trading* IBM became a charter member of the Chicago Climate Exchange in 2003 and registered its North American GHG inventory in order to gain practical experience in a cap and trade system. The company has extended its membership through 2010 and engaged in limited trading on the exchange, but expects to meet its voluntary CCX emission reduction commitment without having to trade any credits. In addition, IBM has one facility in Ireland and four facilities in the UK covered under Phase I of the EU ETS. The company says that management of the EU ETS allocation has not had a material impact on facility operating costs.

*Products & Services* IBM established a formal Product Stewardship program in 1991, focusing on product design for environment and product energy efficiency. The company's innovations have ranged from energy efficient hardware and software solutions and intelligent transportation and utility systems to solar farm technology and consulting services on carbon management. In May of 2007, IBM announced "Project Big Green" to further expand its data center and product energy efficiency goals, as well as to leverage IT expertise for water management projects. The initiative is redirecting \$1 billion per year across the company's businesses to increase energy efficiency in IT. As one example, new generations of hardware products have achieved improvements ranging from 14 to 73 percent in computing performance per unit of energy in 2007.

IBM offers several products specific to energy management and technology. Beyond virtualization services, Active Energy Manager is a hardware/software tool that enables customers to meter and control power usage on an individual server, while Tivoli management software allows for energy management across a data center. In its Cool Blue portfolio, technology solutions include Calibrated Vector Cooling and Rear Door Heat Exchanger for server systems, as well as high efficiency power supplies. The company also continues to innovate in processor level power management and energy efficiency solutions. IBM's newest POWER6 chip doubles performance at virtually unchanged power usage.

The company's Data Center Power Management solutions combine hardware/software solutions with IT and facilities integration and control systems. Services for existing and new data center planning include:

- Data center thermal assessment
- Data Center and Facilities Strategy Services
- IT Facilities Assessment, Design and Construction Services
- IT Facilities Consolidation and Relocation Services
- Specialized Facilities Services – includes intelligent and green building construction and facility management control systems

## *Research & Development*

IBM is applying its research and IT expertise to several environmental challenges, including the intelligent energy grid, smart transportation systems, biofuel development, energy and material use optimization and logistics planning. As one example, the company worked with the city of Stockholm, and previously with Singapore, to provide traffic management and congestion pricing systems. IBM also has a specific "Alternative Energy Research Program" currently working on photovoltaic research and low energy membranes for batteries, water filtration and other applications. In May 2008, the company announced a breakthrough in using its nanotechnology and semiconductor expertise to cool concentrator photovoltaic (CPV) cells, a technology that could significantly reduce the cost of generating solar electricity if commercialized.

## *Supply Chain Management*

In conjunction with its participation in the Electronics Industry Citizenship Coalition, IBM is participating in a working group to develop a common approach that the electronics industry could use to encourage suppliers to inventory and reduce their GHG emissions. IBM is also participating in the Carbon Disclosure Project Supply Chain Leadership Collaboration by querying a selected sample of its suppliers on energy use and GHG emissions. In May 2008, IBM introduced the Carbon Tradeoff Modeler analysis tool that allows companies to analyze and manage the climate impact of their supply chains. The tool allows organizations to understand the outcome of critical tradeoffs to make smarter energy choices and better economic decisions by optimizing on service levels, quality, cost and CO<sub>2</sub> emissions.

In terms of logistics, the IBM Global Logistics team has been working on optimizing operations through several initiatives. IBM is a participant in the US EPA SmartWay Transport program and more than 80 percent of North American shipments are transported by SmartWay partners. Specific SmartWay requirements have also been extended to global distribution operations. The team has also reduced warehouse space and shifted some shipments to more efficient ground and ocean transport.

IBM's package design team now factors transport modes, fuel efficiencies and other options resulting in fewer CO<sub>2</sub> emissions into the early stages of the package development cycle. The team has introduced new packaging systems reducing weights for three product types by over 180 tonnes. The team is focusing on the packaging design for both IBM products and those of its suppliers.



## **About the Authors**

The authors of this report are members of RiskMetrics' Climate Risk Management Team. Doug Cogan leads this team and has more than 20 years of experience in studying investment responses to climate change. Prior to joining RiskMetrics Group, he worked with the Investor Responsibility Research Center and Institutional Shareholder Services, where he wrote several other publications for Ceres and the Investor Network on Climate Risk, including two prior editions of Corporate Governance and Climate Change: Making the Connection. His co-authors on this report are climate change senior analysts Megan Good and Geri Kantor and research analyst Emily McAteer.

## **About RiskMetrics Group**

RiskMetrics Group is a leading provider of risk management products and services to financial market participants. By bringing transparency, expertise and access to the financial markets, RiskMetrics helps investors better understand and manage the risks inherent in their financial portfolios. Solutions address the market, credit, portfolio, governance, accounting, legal and environmental risks of clients' financial assets. Headquartered in New York with 19 offices worldwide, RiskMetrics Group serves more than 2,300 institutions and 1,000 corporations in 50 countries. For more information, please visit [www.riskmetrics.com](http://www.riskmetrics.com).

## **About Ceres**

Ceres is a national coalition of investors, environmental groups, and other public interest organizations working with companies to address sustainability challenges such as climate change. Ceres also directs the Investor Network on Climate Risk, a group of more than 70 institutional investors from the US and Europe managing over \$7 trillion of assets. INCR was launched at the Institutional Investor Summit on Climate Risk at United Nations Headquarters in 2003. The purpose of INCR is to promote better understanding of the risks of climate change among institutional investors. For more information, visit [www.ceres.org](http://www.ceres.org) and [www.incr.com](http://www.incr.com).

### **For more information, contact:**

Anne Kelly  
Director of Governance Programs  
Ceres, Inc.  
99 Chauncy St., 6th Floor  
Boston, MA 02111  
[kelly@ceres.org](mailto:kelly@ceres.org)

[www.ceres.org](http://www.ceres.org)  
[www.incr.com](http://www.incr.com)



**Ceres**

Ceres  
99 Chauncy Street  
Boston, MA 02111  
T: 617-247-0700  
F: 617-267-5400  
[www.ceres.org](http://www.ceres.org)

©2008 Ceres



Nike has been working on climate change issues for several years and over the past two years has integrated its strategy across the business to seek out sustainability efforts that also drive business value. In 2001, Nike set carbon dioxide (CO<sub>2</sub>) emission reduction targets as part of joining the World Wildlife Fund Climate Savers program. The company exceeded these goals in 2005 and has since expanded its targets to cover a wider scope of operations. Leadership has come from President and CEO Mark Parker, who has also been actively involved in the public policy dialogue on climate-related regulation.

**Summary Score: 71**

## Company Information

Nike, the world's leading shoemaker, designs and sells shoes for a variety of sports and also sells athletic apparel and equipment. The company and its subsidiaries sell products throughout the US and in more than 180 other countries. Nike also bought Umbro in 2008. As of 2008, the company had approximately 32,500 employees.

### Contact Information

**Chairman:** Philip H. Knight

**CEO:** Mark G. Parker

**Website:** [www.nikebiz.com](http://www.nikebiz.com)

**Address:** One Bowerman Dr., Beaverton, OR 97005-6453, United States

## Board Oversight

**Score: 8**

### Board Committee/Member

Corporate Responsibility Committee

### Board Role

Nike's Corporate Responsibility Committee was established in 2001 to review significant policies and make recommendations regarding a wide range of corporate responsibility issues, including environmental and sustainability initiatives. The Committee meets three times each year to review strategies and plans for corporate responsibility, and either the Chairman or the CEO attends all meetings. In 2007, the Board of Directors also approved the company's new global corporate responsibility targets, which include greenhouse gas (GHG) emissions reductions and climate neutrality goals.

### Board Training

None identified.

## Management Execution

**Score: 18**

### CEO Leadership

In his introductory letter to the company's FY05-06 Corporate Responsibility report, CEO Mark Parker says, "We are firmly committed to addressing environmental challenges in the world today, both in how we manage our footprint and in the design of our products." Parker has been integral in emphasizing the importance of sustainability and climate change issues to Nike's business and in driving change across the company. At the signing of the Bali Communiqué in December 2007, Parker said, "Tackling climate change is a catalyst for growth and innovation in our company. These are complex issues, which is why international agreement and action is imperative to creating positive change."

Parker has also taken a leadership role in supporting public policy dialogue on climate change. Parker wrote two letters to US Congressional leaders urging consideration of meaningful climate change legislation in 2007 and 2008.

## *Company Strategy*

Nike says in its *Considered Design and the Environment* document, "Climate change is one of the most important issues facing the world today and we understand and accept our responsibility to bring about change in our direct footprint – through owned facilities – as well as to influence our broader manufacturing footprint." Nike also says that it believes climate change is a risk to its business and that creative approaches to tackling the company's footprint will enable growth.

Nike began addressing climate change issues in 1995, initially with a focus on phasing out sulfur hexafluoride (SF<sub>6</sub>), a greenhouse gas contained in shoe air-sole cushioning units. The company has increasingly focused on its impact throughout the entire manufacturing process. In 2001, Nike set CO<sub>2</sub> emissions reduction targets, and has since expanded these targets to cover a wider operations scope. The company is taking a holistic approach that looks at how sustainability efforts drive business value. Nike says, "We firmly believe our commitment to reduce CO<sub>2</sub> emissions will help to create innovative, more profitable and sustainable business processes."

## *Executive Responsibility*

In fiscal year 2006, Nike created a management framework to ensure executive accountability for corporate responsibility (CR) across the company, including environmental and sustainability affairs. The Vice President for Corporate Responsibility reports directly to the CEO, and in turn co-manages a number of CR dedicated teams with business and functional executives. Meanwhile, Nike's Business Leadership Team assists in developing, approving and monitoring CR initiatives. At the operational level, corporate responsibility is managed by functional CR Directors, including a Considered Design director who manages environmental and sustainability issues.

## *External Initiatives*

In 2001, Nike joined the World Wildlife Fund Climate Savers program as a founding partner and set CO<sub>2</sub> emissions reduction targets for owned operations and business travel. In 2008, Nike joined The Climate Group with the goal of joining other companies to accelerate international action on climate change. Nike is also a key sponsor of Focus the Nation, a nationwide initiative focused on generating dialogue on climate change issues among students, faith and civic organizations in the US.

## *Employee Training*

Nike has held climate scenario planning workshops with internal business leaders, helping them understand the possible impacts both climate change and peak oil may have to its business. In addition, the company has held various climate change workshops for employees, including a Climate Café at headquarters focused on ideas for reducing employee carbon footprints. In early 2008, Nike's IT department launched an online forum to help employees share sustainability ideas.

## *Executive Compensation*

Nike's emissions reduction targets are integrated into the business plans and performance targets for relevant company operations. While this may impact performance-based compensation, there are currently no special financial incentives for climate-related goals.

## Public Disclosure

Score: 8

*Annual Report* Nike does not publish a separate annual report; relevant information can be found in the company's annual Form 10-K.

*Securities Filings* No climate change mention.

*Other Disclosure* Nike maintains a separate website, [www.nikeresponsibility.com](http://www.nikeresponsibility.com), describing the company's initiatives across environmental and other relevant CR areas. Also available is "Global Corporate Responsibility Strategy," a document outlining the company's overall vision for corporate responsibility and how it has evolved over the last two years. In this document Nike says climate change is a "primary area of concern." The company's FY05-06 Corporate Responsibility Report covers climate change goals and progress to date in detail.

**Sustainability Report:** *FY05-06 Corporate Responsibility Report*, May 2007

**URL:** [http://nikeresponsibility.com/?#crreport/download\\_report](http://nikeresponsibility.com/?#crreport/download_report)

**GRI Accordance:** G3 Guidelines

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* Nike says in its response that it has taken steps to engage in climate change regulatory developments globally and that the company is prepared for any expected legislation. In terms of physical risks, the company recognizes the potential for changes in consumer demand and has focused on shortening product delivery times and diversifying its product portfolio. Additionally, Nike sees physical impacts potentially affecting its supply chain and has built redundancies into its operations. The company also has a global property protection program that addresses facility locations and design, as well as insurance coverage.

*Public Policy* On November 19, 2008, Nike joined with four other US companies and Ceres to launch a new business coalition calling for strong US climate and energy legislation in early 2009 to spur the clean energy economy and reduce GHG emissions. The Business for Innovative Climate and Energy Policy (BICEP), whose founding members also include Levi Strauss & Co., Starbucks, Sun Microsystems and The Timberland Company, was launched to emphasize the importance of addressing climate change across all sectors of the economy. The group's key policy recommendations include stimulating renewable energy, promoting energy efficiency and green jobs, requiring 100 percent auction of carbon allowances, and limiting new coal-fired power plants to those that capture and store carbon emissions.

Nike says it "has been actively engaged and will continue to be engaged with policymakers on the issue of climate change to promote the passage of meaningful climate change legislation that includes amongst other things targets consistent with the IPCC science recommendations, a cap and trade system, strong commitments to energy efficiency and renewables and investment in green collar jobs." The company has been involved in the following public policy activities:

- Met with the EU government on climate change legislation passed in 2005
- Testified at two field hearings of the US House of Representative's Select Committee on Global Warming and Energy Independence

- CEO Mark Parker wrote two letters to US Congressional leaders urging consideration of meaningful climate change legislation in 2007 and 2008
- Signatory to the International Business Leaders Communiqué in November 2007 in advance of the United Nations Climate Change Conference in Bali
- Signatory to the WWF Tokyo declaration in February 2008
- Sponsor of Focus the Nation in 2008 and 2009, a college to Congress outreach campaign to stop global warming
- Member of the Oregon Governor's Climate Change Integration Group, precursor to the Commission that was created by HB3543; testified in favor of Oregon HB354

## Emissions Accounting

Score: 9

GHG Emissions Inventory

Year: 2005

Facility/Region: Owned facilities and travel

Protocol: Other

Emissions	CO <sub>2</sub> e (Metric Tonnes)
<b>Total Emissions</b>	<b>1,360,000</b>
Scope 1 (Direct)	—
Scope 2 (Indirect –Electricity)	—
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

Accounting Methods

Nike's most recent emissions inventory covers the GHG emissions generated in calendar year 2005 for Nike owned facilities and business travel. In January-March 2006, energy use data was collected (which was converted to CO<sub>2</sub> emission data) for calendar year 2005. A global climate database and reporting infrastructure is currently being developed to capture and report all related climate and energy data.

External Verification

Under the World Wildlife Fund Climate Savers program, Nike submits all inventory data to CH2MHill for a third party review. The program requires biannual progress reports on meeting its reduction commitments and annual progress reports at Corporate Climate & Energy Summits.

Certified CO<sub>2</sub> Offsets

Nike purchased its first offsets for business travel emissions in 2000. Since then, the company has procured a total of 111,000 tonnes of CO<sub>2</sub> offsets for nearly half of its business travel emissions.



## Strategic Planning

Score: 28

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions	Carbon neutral	—	FY15	All facilities and business travel
GHG Emissions (Absolute)	30%	2003	FY20	Inbound logistics

#### Target Details

In May 2007, Nike set new targets to further reduce the company's CO<sub>2</sub> emissions from the 1.36 million metric tonnes per year of FY06. Targets include:

- Achieve climate neutrality among Nike brand facilities (offices, distribution centers, retail) and business travel by FY11
- Achieve climate neutrality among all Nike, Inc. facilities and business travel by FY15
- Achieve 30 percent absolute reduction in inbound logistics footprint from a 2003 baseline by FY20
- Nike also plans to establish a CO<sub>2</sub> emissions reduction plan for footwear contract manufacturing and a model for measuring outbound emissions (distribution center to retail) in 2008.

#### Target Achievement

Nike achieved its original company-wide target of reducing annual CO<sub>2</sub> emissions to 13 percent below 1998 levels by the end of 2005. Actual reductions were 18 percent. This target applied to Nike-owned and operated facilities (20,000 square feet or more) and business travel. Nike also eliminated all sulfur hexafluoride (SF<sub>6</sub>) from its footwear as of June 2003 and all perfluoropropane (PFP), both greenhouse gases, as of June 2006. The elimination of SF<sub>6</sub> alone represents a reduction of more than 80 percent of the company's total GHG emissions footprint since 1997.

#### Energy Efficiency

Nike says that it sees value in reducing facility energy use from both environmental and cost-saving standpoints. The company re-invests savings into additional energy efficiency efforts. Nike retail facilities conserve energy through efficient air conditioning and lighting systems, while distribution centers use spot cooling and solar tracking skylights. Meanwhile, the company's European headquarters in the Netherlands include a ground source heat pump and daylight harvesting, while a distribution center in Laakdal, Belgium utilizes a highly insulated shell and pre-cooling system to better regulate temperatures. Some highlights of energy efficiency achievements include:

- Two of Nike's world headquarters buildings in Oregon received LEED for Existing Buildings certification from the US Green Business Council. The Ken Griffey, Jr, building was certified Gold. In addition, the Stringer Daycare Center at world headquarters and Nike's new distribution center in Memphis, TN are pursuing LEED certification.
- The world headquarters in Oregon was recognized by the US EPA as a top workplace for commuters for the company's alternative transportation program.
- The US EPA's Energy Star rating for exceptional energy performance has been given to four of its world headquarters' buildings.

Nike has calculated that renewable energy purchases and energy efficiency measures at the company's world headquarters have saved the company more than \$500,000 and 9.3 million kilowatt hours each year. Nike has also launched the Nike Energy Challenge, a competition among company facilities to determine which can be the most energy efficient.

In terms of employee commuting and business travel, Nike promotes alternative transportation options, provides electric vehicle charging stations, promotes virtual meetings and offsets 100 percent of business air travel.

## *Renewable Energy*

Nike has steadily increased its purchase of direct renewable energy and renewable energy credits since 2001. As of the end of 2006, renewable energy covered approximately 52 percent of the electricity used by major Nike facilities. Nike is also purchasing renewable energy credits from Sterling Planet equivalent to 100 percent of the electricity consumption at its world headquarters in Oregon and the company's European Headquarters in Hilversum, The Netherlands, runs on 100 percent renewable energy.

Nike has also supported an innovative program at the Portland International Airport through the funding of a solar panel array that offsets approximately 75 percent of the electricity used by Nike's airport store. The company has tripled the installation's capacity in 2008 so that it is expected to offset the entire store's energy use as well as some airport operations. In addition, Nike's European distribution center in Laakdal, Belgium, installed six wind turbines, providing enough capacity to power the 2 million-square-foot facility. Nike is the first company of its size in Belgium to operate solely on green energy that is produced on site.

## *Emissions Trading*

Nike is participating in the voluntary carbon market through the sale of credits generated from the elimination of F-gases from Nike products. This project has been verified and registered by Environmental Resources Trust. In 2006, the company sold 100,000 tonnes of SF<sub>6</sub> voluntary emission reductions (VERs) to be used to provide solar energy to new schools and homes in New Orleans, Louisiana. Nike also says it will use proceeds from this and future sales for additional emissions control projects in its manufacturing supply chain.

## *Products & Services*

Nike recently launched a new comprehensive product design philosophy called Considered Design, incorporating principles of environmental sustainability. The company has formed a sustainable product innovation team and has educated designers on new guidelines.

Nike has also begun to look at the embedded energy in its footwear products and plans to improve measurement in this area. Ultimately, Nike says "the ability to measure emissions intensity across a range of materials as well as add in components from manufacturing, packaging and transportation will enable us to incorporate this in our Considered Index, which is a tool that helps designers reduce the impact of our products across a range of environmental factors."

## *Research & Development*

One of the major product development projects Nike has taken on over the last 14 years is the elimination of greenhouse gases (SF<sub>6</sub> and PFP) from Nike-brand footwear. Nike put 60 experts from more than 50 external organizations to work on various aspects of this complex project. In 2006, ahead of upcoming regulation banning F-gases, Nike delivered an all-nitrogen alternative to the F-gases used in its air-cushioned shoes.

## *Supply Chain Management*

Nike says in its Considered Design and the Environment document, “As sustainability becomes a differentiator for brands and a source of competitive advantage, we think it is crucial that the consumer has accurate, complete information on not just the delivery of ‘green’ products, but the extent to which the company is committed to greening its entire supply chain.”

As early as 2003, Nike developed a baseline of its supply chain general environmental footprint, including inbound logistics and subcontracted manufacturing. Then, as part of the company’s Climate Savers agreement, Nike partnered with the University of Delaware to develop a model for measuring inbound emissions of product transportation from factory to first distribution facility. Nike is working to expand that model to measure outbound shipments from distribution facility to retail. Footwear contract manufacturing, a majority of which is in Vietnam and China, is another major challenge for Nike. The company has begun with audits of key factories to identify energy-intensive processes and potential areas of savings.

Nike is also exploring strategies around packaging, fuel economy and air freight. For example, Nike’s US supply chain team has set goals to reduce its overall carbon footprint and is working closely with third-party logistics providers to find opportunities to optimize fuel consumption and accelerate the use of alternative fuels. Nike also assessed its packaging footprint as part of a company-wide waste mapping exercise in fiscal year 2006.

# H&M HENNES & MAURITZ AB

STOCKHOLM STOCK EXCHANGE – HMB  
Apparel

In 2007, Hennes & Mauritz AB (H&M) introduced a new company-wide Sustainability Policy and a four-pronged approach to address climate change. The company has monitored carbon dioxide (CO<sub>2</sub>) emissions since 1999 and has achieved ahead of schedule its goal to reduce emissions by 10 percent relative to sales. H&M has also set a goal for 2008 to develop a system to monitor the greenhouse gas (GHG) emissions embedded in the company's supply chain and already has stringent environmental requirements for its transport carriers.

**Summary Score: 54**

## Company Information

H&M operates more than 1,500 clothing stores in about 25 countries and has direct sales operations in selected areas. Germany is the company's leading market, accounting for nearly 25 percent of sales. About 60 percent of its clothing is made in Asia; the rest is manufactured primarily in Europe. H&M opened its first women's clothing store in 1947 as Hennes (Swedish for "hers"); it later bought the hunting and men's clothing store Mauritz Widforss. At the end of fiscal year 2007, H&M had approximately 68,000 employees.

### Contact Information

**Chairman:** Stefan Persson

**CEO:** Rolf Eriksen

**Website:** [www.hm.com](http://www.hm.com)

**Address:** Regeringsgatan 48, SE-106 38 Stockholm, Sweden

## Board Oversight

**Score: 3**

### Board Committee/Member

None identified.

### Board Role

H&M's Corporate Social Responsibility Manager reports to the CEO and the Board of Directors on environmental and climate change issues.

### Board Training

None identified.

## Management Execution

**Score: 10**

### CEO Leadership

In his introductory letter to the 2007 Annual Report, Managing Director and CEO Rolf Eriksen states, "Increasing attention is being paid to sustainability issues– not least of which is the subject of climate change." The company's 2007 CSR report also features a conversation between Eriksen and CSR Manager Ingrid Schullström on the company's overall CSR strategy and highlights climate change as an important challenge and opportunity.

### Company Strategy

H&M issued a new company-wide Sustainability Policy and environmental objectives in 2007. The Sustainability Policy states, "By adopting new technologies and methods, we can work preventatively to minimize our environmental footprint through improved production processes and our choice of materials. We must continuously review the company's goals and strategies to reduce the company's climate impact."

In 2007, H&M formulated the company's approach to climate change across four key areas: production process, buying process, transport and travel and sales. The company has set

# H&M HENNES & MAURITZ AB

specific objectives in each of these areas and communicates these in its 2007 Corporate Social Responsibility report.

## *Executive Responsibility*

H&M's environmental and climate change efforts are led by the company's global CSR team. The CSR team consists of around 80 staff members who work on social and environmental issues. The department is led by a CSR Manager who reports directly to the CEO.

## *External Initiatives*

None identified.

## *Employee Training*

H&M says that Corporate Social Responsibility is a significant part of employee training at the company. It is included in all staff's induction training and in training for store staff. In 2007, employees were given information on audio and videoconferencing options and were educated on how this can reduce the company's environmental impact.

## *Executive Compensation*

None identified.

## Public Disclosure

Score: 10

### *Annual Report*

In his introductory letter to the 2007 Annual Report, Managing Director and CEO Rolf Eriksen addresses the company's new sustainability policy, including climate change, and its work with suppliers in this area. The report also highlights H&M's logistics and distribution systems that emphasize "clean and efficient modes of transport with limited environmental impact", as well as other sustainability efforts.

### *Securities Filings*

Company has not filed a Form 10-K or 20-F with the US Securities and Exchange Commission.

### *Other Disclosure*

H&M's Corporate Social Responsibility 2007 report includes a section entitled "Our Carbon Footprint" that outlines objectives across four key areas of the company's climate change strategy: production process, buying process, transport and travel and sales. The report also includes CO<sub>2</sub> emissions data from 2004 through 2007, as well as areas of progress in 2007. The company publishes a separate 52-page "Performance" document that includes data on CO<sub>2</sub> emissions by source.

**Sustainability Report:** *Corporate Social Responsibility 2007*, May 2008

**URL:** [http://www.hm.com/static/csrreports/2007/pdf/CSR\\_Report.pdf](http://www.hm.com/static/csrreports/2007/pdf/CSR_Report.pdf)

**GRI Accordance:** Level C

### *Carbon Disclosure Project*

Answered Questionnaire (Public)

### *CDP6 Risk Disclosure*

H&M recognizes that pending climate change regulations and energy efficiency standards may affect its operations in various markets, including the Carbon Reduction Commitment scheme in the United Kingdom and the California Energy Commission's Building Energy Efficiency Standards. Overall, H&M believes such regulations offer the opportunity to invest in energy efficient technology that will also bring cost savings. However, the company also notes that emissions regulation schemes could increase electricity, construction material and transportation costs.



# H&M HENNES & MAURITZ AB

The company also says it is prepared to deal with severe weather events that may increase in frequency due to climate change. It notes that changes to water availability could affect cotton production and its sourcing of fabrics. Finally, H&M recognizes that managing its operations in a sustainable manner will be important to retaining customer loyalty.

## Public Policy

While H&M has not made public an official statement in support of climate change regulation or other public policies, the company underwrote an advertisement by the Tällberg Foundation in the *Financial Times*, *International Herald Tribune* and *New York Times* encouraging policy makers to adopt 350 parts per million as maximum CO<sub>2</sub> level, as advocated for by the International Panel on Climate Change and other scientific bodies.

## Emissions Accounting

Score: 10

GHG Emissions Inventory

Year: 2007

Facility/Region: Global

Protocol: Other

Emissions	CO <sub>2</sub> e (Metric Tonnes)	
<b>Total Emissions</b>		
<b>Scope 1 (Direct)</b>	<b>5,835*</b>	* Fuel for vehicles owned by H&M and fuel for heating of distribution centers (where H&M purchases directly from the supplier)
<b>Scope 2 (Indirect –Electricity)</b>	<b>63,642</b>	** Business travel, including when employees receive mileage reimbursement for use of private cars
<b>Scope 3</b>	—	
<b>Travel</b>	<b>21,335**</b>	***Transportation of H&M goods by road, rail, sea and air. When transport providers are unable to provide calculated emissions, H&M estimates emissions based on routes and volumes using the Network for Transport and the Environment NTMCalc tool.
<b>Logistics</b>	<b>146,305***</b>	
<b>Products</b>	—	
<b>Supply Chain</b>	—	

## Accounting Methods

H&M has monitored CO<sub>2</sub> emissions since 1999, originally applying methodology from the Folksam and Finanstidningen Environmental Index, used by the Stockholm stock exchange. The company has since adapted this methodology, but has not switched to the GHG Protocol completely in order to maintain consistency from 2004 through the end of its current emissions reduction target in 2009. At present, H&M does not include CO<sub>2</sub> data for stores where the company does not purchase electricity itself.

## External Verification

H&M says that at present external verification is not a priority. However, the company has not ruled out the possibility of having its CSR reporting externally verified in the future.

## Certified CO<sub>2</sub> Offsets

None identified.

## Strategic Planning

Score: 21

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Intensity)	10% relative to sales	2004	2009	Global
Energy Use	20%	TBD	2020	All stores
Renewable Energy	20%	—	2020	All stores

### Target Details

H&M's target is to reduce CO<sub>2</sub> emissions between 2005 and 2009 by 10 percent relative to sales, using 2004 as a baseline data year. The target covers all emission sources included in the company's GHG emissions accounting for 2007.

In addition, in 2007 H&M joined the "Retail Declaration on Energy Efficiency and Renewable Energy" initiative within the framework of the European Retail Round Table, making targeted commitments towards meeting the European 2020 energy targets. This includes a commitment to reduce energy use in stores by at least 20 percent per square meter and to source at least 20 percent of energy from renewables by 2020.

### Target Achievement

H&M's total CO<sub>2</sub> emissions for 2007 were 237,117 tonnes, a decrease of 21 percent compared to 2006. This allowed the company to exceed its 2009 target ahead of schedule. Two significant areas where reductions were achieved were in the use of renewable energy and the reduced use of air transport for the company's products. Meanwhile, the company's revenue increased by 15 percent in 2007 with only a nine percent increase in electricity use, indicating improvements in energy efficiency. Emissions from transport by air or a combination of sea and air were reduced by 20 percent.

### Energy Efficiency

H&M is focused on improving the energy efficiency of its stores while also finding solutions to reduce business travel. In its stores, H&M will establish energy efficiency requirements for display installations and install energy efficient escalators and lighting controls. A number of sales countries check energy consumption continually in order to identify any abnormalities. In 2010, the company plans to test various energy efficient solutions in a new warehouse.

Through its involvement with the European Retail Round Table, H&M has also committed to sharing best practices on energy efficiency solutions with the retail industry. In 2008, H&M also plans to evaluate how audio and videoconferencing can be used to reduce business travel.

### Renewable Energy

In 2007, H&M purchased 41,519 MWh of climate change levy exempt electricity in the United Kingdom. The company also purchased 175,000 MWh of certified renewable electricity (using Guarantees of Origin certificates) from a large European energy company and allocated these across its European operations.

### Emissions Trading

H&M is not engaged in emissions trading at this time. The company says its focus is on reducing emissions without the use of offsets.

### Products & Services

H&M aims to address the environmental impacts of its products during the design, production, delivery and sale stages. The company has also set a goal for 2008 to identify a

tool for calculating the CO<sub>2</sub> emissions from the manufacturing of its products. Through its involvement with the European Retail Round Table, H&M will also investigate how energy efficiency information related to its products can be shared with consumers through labeling, online information or other campaigns.

## *Research & Development*

None identified.

## *Supply Chain Management*

H&M has set a goal for 2008 to develop a system to monitor the GHG emissions embedded in the company's supply chain. The company plans to implement this system in 2009. The company has already made significant strides in managing the environmental impact of its logistics and distribution systems. The majority of H&M merchandise is transported by ocean, but whenever possible, transport by rail is the first choice. The company also manages its logistics operations to streamline routes and centralize distribution centers. H&M recently opened a new distribution center in Poland and will be opening another center in Germany to serve stores in Germany, the Netherlands and Austria.

In addition, since 2001, H&M has evaluated its transport service providers on a variety of environmental factors, including the following minimum requirements as of 2007:

- Road transport performed for H&M must be carried out with vehicles meeting the automotive emissions requirements of Euro 2 or US 94
- All vehicles purchased must meet the requirements of Euro 4 or US 04
- At least 75 per cent of drivers must have received theoretical and practical training in fuel-efficient driving
- The transport service provider must have a policy banning idling in excess of one minute.

From 2008, H&M will also be applying the Clean Shipping Project's criteria when assessing the environmental performance of transport companies. Finally, H&M has begun to engage with suppliers on their own environmental practices. The company has a program to encourage both direct and indirect supplier factories to switch to cleaner production processes involving reduced energy and water consumption. H&M has worked with an independent consultant and the Wuppertal Institute in Germany to create tools for helping suppliers to identify potential resource savings. As one example, a supplier in Bangladesh replaced 2,200 light bulbs to low-energy bulbs and began capturing and reusing heat from its machinery.

Gap Inc. joined the US EPA Climate Leaders program in 2003 and has worked with the organization to develop its greenhouse gas (GHG) emissions reduction plan. In May 2005, the company pledged to reduce US GHG emissions by 11 percent per square foot from 2003 to 2008 and has already made progress by reducing energy use by 12.7 percent between 2003 and 2007.

**Summary Score: 34**

## Company Information

Clothing retailer Gap Inc. operates more than 3,100 stores worldwide, including those for its other brands Banana Republic and Old Navy. Other brand extensions include GapBody, GapKids, and babyGap. All Gap clothing is private-label merchandise made exclusively for the company. As of 2008, the company had approximately 150,000 employees.

### Contact Information

**Chairman/CEO:** Glenn K. Murphy

**Website:** [www.gapinc.com](http://www.gapinc.com)

**Address:** 2 Folsom St. San Francisco, CA 94105, United States

## Board Oversight

**Score: 4**

### Board Committee/Member

Governance, Nominating and Social Responsibility Committee

### Board Role

The Governance, Nominating and Social Responsibility Committee is responsible for oversight of the company's policies and practices relating to social and environmental issues.

### Board Training

None identified.

## Management Execution

**Score: 8**

### CEO Leadership

Former Chairman and CEO Robert Fisher highlighted the company's recent environmental efforts in his introductory letter to the company's 2006-2006 *Social Responsibility Report*: "We made important progress in 2006, including further reducing energy consumption in our US stores."

### Company Strategy

Gap Inc. has worked with external consultants CH2M HILL and SustainAbility to examine environmental challenges and analyze potential impact to its business. The company developed an environmental strategy focused on three key areas where the company believes it can have the greatest positive impact: energy conservation, cotton/sustainable design, and output/waste reduction (ECO).

The company states on its website: "We believe we have a responsibility to use energy wisely and efficiently. By working to reduce energy use in our stores, distribution centers and headquarters buildings, we can help reduce greenhouse gas emissions, a primary contributor to global climate change. Not only does increasing our energy efficiency reduce our environmental impact, but it's also good for our business."

# THE GAP INC.

<i>Executive Responsibility</i>	Dan Henkle, Senior Vice President of Social Responsibility, directs the implementation of the company's social responsibility strategy. He is responsible for an Environmental Affairs team and reports directly to the Executive Vice President, Human Resources, Communications and Social Responsibility, who in turn reports to the CEO.
<i>External Initiatives</i>	Gap Inc. joined the US EPA Climate Leaders program in 2003 and has worked with the organization to develop its emissions reduction plan. In 2007, the company also joined a coalition of companies working with the United Nations Global Compact and the City of San Francisco to form the Business Council on Climate Change (BC3). The group will offer a forum to share best practices and a model for climate action in the commercial and public sectors that can be replicated in other cities.
<i>Employee Training</i>	For the company's Gap, Banana Republic, Old Navy and Gap Inc. Outlet divisions, energy management training has been offered at store manager conferences.
<i>Executive Compensation</i>	None identified.

---

## Public Disclosure

Score: 3

<i>Annual Report</i>	No climate change mention.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	<p>Gap Inc. has a "Caring for the Environment" section on its website that outlines company efforts in energy conservation, waste reduction, sustainable design in products and buildings and supply chain management. The company's most recent social responsibility report, which will be updated every two years, includes an overview of climate change strategies and the following statement: "We believe that businesses must take immediate action to address climate change. We are committed to reducing our own greenhouse gas emissions, primarily through energy conservation efforts."</p> <p><b>Sustainability Report:</b> 2005-2006 Social Responsibility Report, August 2007 <b>URL:</b> <a href="http://www.gapinc.com/public/documents/CSR_Report_05_06.pdf">http://www.gapinc.com/public/documents/CSR_Report_05_06.pdf</a> <b>GRI Accordance:</b> G3 Draft</p>
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	Gap Inc. states in its CDP response: "we do not believe that we face unique risks associated with climate change. We do, however, feel that there is an increased consumer interest in environmental issues, which may present opportunities to enhance our reputation based on our commitment to reducing our impact on the environment and from further educating our consumers on our energy conservation programs and progress."
<i>Public Policy</i>	None identified.

---



## Emissions Accounting

Score: 10

GHG Emissions Inventory    Year: 2007    Facility/Region: United States    Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	28,574*
Scope 2 (Indirect –Electricity)	645,803
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

\* Includes stationary combustion of fuels in space heating equipment, backup generators and mobile combustion in corporate jets.

\*\* A portion of the electricity supplied by Gap Inc.'s electricity providers is generated by renewable sources, not accounted for here.

*Accounting Methods*    All stores, corporate offices, distribution centers and corporate aircraft are included in the GHG inventory, excluding leased real estate and/or offices where the landlord does not provide visibility to utility bills. Gap Inc. is also beginning an effort to quantify emissions from external distribution/logistics.

*External Verification*    The emissions calculations are reviewed annually by the EPA Climate Leaders program, including desktop and on-site reviews of the company's Inventory Management Plan.

*Certified CO<sub>2</sub> Offsets*    None identified.

## Strategic Planning

Score: 9

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Intensity)	11% per square foot	2003	2008	United States

*Target Details*    In May 2005, Gap Inc. pledged to reduce US GHG emissions by 11 percent per square foot from 2003 to 2008. The company worked with the EPA Climate Leaders program to benchmark this goal against the projected GHG performance of the retail sector and to ensure that it is aggressive and achievable.

*Target Achievement*    Gap Inc. reduced energy use in its US stores by 12.7 percent between 2003 and 2007.

*Energy Efficiency*    Gap Inc. is currently monitoring energy consumption in about 40 percent of its US stores through a computerized energy management system. The system monitors lighting, heating, ventilation and air-conditioning systems, and helped Gap Inc. to reduce energy use in its US stores by 12.7 percent between 2003 and 2007. Old Navy stores have also introduced a Time to Shine program, an online resource that includes energy conservation guidance for stores managers.

The company's distribution centers worldwide have also reduced energy consumption by resetting thermostats, replacing and reducing lighting and installing automatic controls for shutting off conveyor systems. The company's three largest US distribution centers use computerized building management systems to monitor and control energy use. Meanwhile, Gap Inc.'s headquarters office in San Francisco, California is an innovative green building project using fly ash, a waste by-product from burning coal, instead of concrete for the building's foundation. The company estimates that this saved approximately 2,000 tons of CO<sub>2</sub> that would have been generated during cement production.

In terms of employee commuting, Gap Inc. has been recognized by the San Francisco Bay Area Council for best practices as a Regional Transportation Initiative Employer for the wide range of employee transportation options the company supports. Gap Inc. utilizes company shuttles, encourages carpooling by offering commuter benefits and provides facilities for employees who commute by bicycle. In addition, the company recently partnered with Zipcar to provide free membership and discounted rates to employees anywhere Zipcar is located, including San Francisco, New York, Toronto and London.

#### *Renewable Energy*

In 2007, Gap Inc. announced plans to host a one MW solar power system on its West Coast distribution center campus in Fresno, California. Slated for completion in 2008, the system is expected to generate approximately 1.9 million kWh annually. In addition, when it launched in 2005, the company's Forth & Towne brand made a commitment to support renewable energy. During the brand's lifetime (stores were closed in February 2007), its purchase of RECs offset 50 percent of its energy consumption and prevented the emission of more than 502 tons of GHGs.

#### *Emissions Trading*

Gap Inc. currently has no plans for engaging in emissions trading.

#### *Products & Services*

While Gap Inc. offers several organic cotton and sustainable fiber product lines, the company has not launched products specifically addressing climate change solutions.

#### *Research & Development*

None identified.

#### *Supply Chain Management*

Under the company's Code of Vendor Conduct, supplier factories must develop an environmental management system and in 2005 all Vendor Compliance Officers received training on this requirement. The Code of Vendor Conduct does not address climate change-specific issues.

adidas has been working with its suppliers on improving environmental performance for several years and views this as a critical aspect of the company's overall sustainability strategy. In particular, adidas has conducted energy efficiency training workshops with suppliers in Asia and is working on establishing environmental targets with suppliers. The company has not yet conducted a greenhouse gas (GHG) emissions inventory or set emission reduction targets for its own operations.

**Summary Score: 28**

## Company Information

The world's second largest maker of sporting goods, adidas designs, produces and markets a broad range of athletic and sports lifestyle products. The company offers its products through three main brands: adidas, Reebok and TaylorMade-adidas Golf. Products include footwear, apparel and hardware, such as bags and balls. The company sold its Salomon unit, the French maker of ski and golf gear, to Amer Sports Corp. and bought Reebok in 2006. As of 2008, the company has approximately 34,000 employees.

### Contact Information

**Chairman Supervisory Board:** Hans Friderichs  
**Chairman Executive Board and CEO:** Herbert Hainer

**Website:** [www.adidas-group.com](http://www.adidas-group.com)

**Address:** Adi-Dassler-Strasse 1, 91074 Herzogenaurach, Germany

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 8**

### CEO Leadership

CEO Herbert Hainer begins his introductory statement to the company's 2007 online corporate responsibility report with the following: "Perhaps in years to come 2007 will be seen as the year the world really woke up to the challenge of climate change...Certainly climate change is one of a number of key issues for our global society to face, along with disease, poverty and resource consumption. As the adidas Group strives to improve its social and environmental performance, we recognise that we can, and must, take action and encourage others in our supply chain to take action if we are to make a difference and become a sustainable business."

### Company Strategy

adidas says in its 2007 Corporate Responsibility report: "The scientific consensus is that human activity is warming the planet in ways that might have 'abrupt and irreversible' consequences...We too are dedicated to making progress to reduce our contribution to climate change and minimise our other impacts on the environment."

The company views its environmental impact across all stages of the product lifecycle and efforts are focused on supplier sites where more than 95 percent of the company's products

are made. The company is focused on two areas of environmental impact – materials that go into products and controlling pollution at factories. A Social and Environmental Affairs team manages three-year sustainability strategies that are translated into annual action plans. Progress is measured at fixed review dates and results are reported to the Executive Board.

*Executive Responsibility*

Set up in 1997, the Social and Environmental Affairs (SEA) team ensures compliance with the company's 'Workplace Standards' and manages environmental and community affairs programs, including those related to climate change. The Global Director of SEA reports to the company's General Counsel. The SEA team with over 60 staff is organized into three regional teams covering Asia, the Americas and Europe, and the Middle East and Africa. There are also several functional groups including an Environment/Product Stewardship group. SEA collaborates closely with other global functions such as Sourcing, Legal, Marketing, Product Development, Facility Management and Human Resources.

*External Initiatives*

None identified.

*Employee Training*

At Reebok headquarters in Canton, Massachusetts employee programs include a carpool sharing database, alternative transportation awareness events and Bike to Work days.

*Executive Compensation*

None identified.

---

## Public Disclosure

**Score: 6**

*Annual Report*

adidas' 2007 Annual Report includes a "Sustainability" section that addresses the company's overall social and environmental strategy and focuses on supply chain efforts. The report does not specifically address climate change issues.

*Securities Filings*

Company has not filed a Form 10-K or 20-F with the US Securities and Exchange Commission.

*Other Disclosure*

New for 2007, adidas produced two corporate responsibility publications: a magazine-style review and a detailed online report. One of the four main topics covered in the printed review is climate change. The company's website also includes a Sustainability section with an overview of its approach to managing environmental impacts, improving materials and tackling pollution. Various performance data on environmental initiatives is also available online.

**Sustainability Report:** 2007 Corporate Responsibility Report, March 2008

**URL:** <http://www.adidas-group.com/en/SER2007/>

**GRI Accordance:** G3 – C Self Declared

*Carbon Disclosure Project*

Answered Questionnaire (Public)

*CDP6 Risk Disclosure*

adidas recognizes that regulatory and physical risks related to climate change may affect its entire supply chain, from materials sourcing to global transportation costs. The company's response strategy focuses on training suppliers on environmental best practices. In addition, adidas sees indirect impacts potentially affecting consumer demand and global sourcing structures.

*Public Policy* adidas has cooperated with government institutions such as the German National Environmental Agency for a project to harmonize and define CO<sub>2</sub> calculation systems across Europe. In November 2007, adidas signed the Bali Communiqué calling for a comprehensive, legally-binding United Nations framework to tackle climate change.

## Emissions Accounting

Score: 5

*GHG Emissions Inventory* Year: 2007 Facility/Region: Global Protocol: Other

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	—
Scope 2 (Indirect –Electricity)	—
Scope 3	—
Travel	23,500
Logistics	—
Products	—
Supply Chain	—

*Accounting Methods* adidas does not report on GHG emissions, but the company provides annual energy consumption data for its operated sites and specific product groups. The average energy use of a pair of sports shoes in 2007 was calculated as 2.93 kWh. The company also reports freight types used to ship products from 2005 to 2007.

*External Verification* adidas has had consumption data from its own footwear production sites verified according to the EU Eco-Management and Audit Scheme (EMAS).

*Certified CO<sub>2</sub> Offsets* adidas has committed to fund a carbon offset project meeting the WWF quality standards. The project will fund the construction of small bio-gas facilities in Nepal. Details on emissions savings and capital investment were not available.

## Strategic Planning

Score: 9

*Emissions Reduction Targets* None identified.

*Target Details* adidas says that given its operation of an external multi-tiered supply chain, no quantitative emission reduction targets have been set to date because supplier operations can not be fully controlled by the company. For sites that are owned and directly operated by adidas, an environmental benchmark analysis has been conducted that will be the basis for quantitative reduction targets from 2010 onwards. The company also plans to introduce environmental impact reduction targets for its suppliers.

*Target Achievement* None identified.



*Energy Efficiency* adidas says that it considers environmental issues whenever the company designs new buildings or refurbishes existing ones. For example, the redesign of the company's global headquarters in Herzogenaurach, Germany included avoiding energy-intensive air conditioning and installing innovative heating and cooling systems. Reebok headquarters in Canton, Massachusetts went through an environmental re-engineering process in 2003-4 with upgrades for heating, cooling and lighting equipment. Annual savings were calculated of nearly 2 million kWh. The company's Scheinfeld, Germany factory has reduced energy consumption for each of the past three years totaling a 13.5 percent reduction in average energy use.

The company is also monitoring its business travel GHG emissions and says it will encourage less air travel by setting emissions reduction targets.

*Renewable Energy* None identified.

*Emissions Trading* None identified.

*Products & Services* adidas says in its latest response to the Carbon Disclosure Project that it recognizes potential growing consumer interest in the emissions footprint of products. The company is focused on using more sustainable raw materials and reducing material diversity to lower transportation impacts. The company's Integrated Product Policy (IPP) identifies environmental impacts throughout the life cycle of products and, with stakeholder cooperation, explores solutions to these impacts.

*Research & Development* The company has conducted a pilot lifecycle assessment study of athletic footwear products supported by the Environmental Ministry of Bavaria. This ongoing project has worked to develop a measurement tool that can be extended to other product lines.

*Supply Chain Management* adidas has made it mandatory for all core suppliers to establish environmental management systems and the company is engaged with its suppliers on sharing best practices and environmental training. A detailed set of environmental indicators has been developed to measure, track and analyze the environmental performance of factories, particularly in footwear production. In 2008, the company also plans to introduce environmental targets for some suppliers based on these indicators.

In 2005, the company conducted assessments with suppliers to understand their environmental priorities; many reported that energy consumption was a major concern. Therefore, in 2007 several energy efficiency training workshops were held with over 100 suppliers in China and Vietnam. The workshops included in-depth training on energy management and advice on how to safeguard production performance while at the same time reducing climate change impacts. The company plans to extend these workshops in EMEA and Asia in 2008. The company is also working to minimize the impacts from product transport, with a focus on reducing air shipments.

Limited Brands' climate change strategy is focused on energy efficiency at its stores, offices and distribution centers as well as improvements to its transport logistics systems. However, there is limited evidence of board or executive leadership with respect to climate change, and while the company has conducted a greenhouse gas (GHG) emissions inventory, it has not yet set emission reduction targets.

**Summary Score: 25**

## Company Information

Limited Brands operates about 2,925 stores throughout North America under the Victoria's Secret, Bath & Body Works and La Senza banners. Originally focused on apparel, Limited Brands sold its Limited Stores and Express chains to focus on intimate apparel, beauty and personal care products and accessories. The company also owns apparel importer MAST Industries, department store operator Henri Bendel and The White Barn Candle Co. As of 2008, the company had approximately 97,500 employees.

### Contact Information

**Chairman/CEO:** Leslie H. Wexner

**Website:** [www.limitedbrands.com](http://www.limitedbrands.com)

**Address:** 3 Limited Pkwy., Columbus, OH 43216, United States

## Board Oversight

**Score: 0**

### Board Committee/Member

None identified.

### Board Role

The Board of Directors has oversight responsibility for management's operation of the business, including relevant climate change issues. There is no single Board committee to which the Board has delegated oversight of all aspects of climate change.

### Board Training

None identified.

## Management Execution

**Score: 4**

### CEO Leadership

None identified.

### Company Strategy

Limited Brands says in its latest response to the Carbon Disclosure Project that it is "serious about integrating the protection and preservation of global resources into our everyday business practices." The company has a general environmental policy to manage natural resources through "thoughtful procurement" and its daily business operations. This includes a commitment to conserve energy, partner with environmentally responsible suppliers and build relationships with environmental agencies and NGOs. The company's climate strategy is focused on building energy efficiency and reducing fossil fuel consumption through logistics improvements.

### Executive Responsibility

Functional experts within the company have responsibility for various aspects of the company's climate change strategy, while senior management has collective responsibility for the company's policies and practices related to climate change.

### External Initiatives

The company has joined the following external initiatives: USEPA SmartWay; USEPA WasteWise. In September 2008, Limited Brands submitted the Partnership Agreement to the US EPA for the Climate Leaders program, and will be working with the agency to develop a GHG inventory and reduction goals.

# LIMITED BRANDS, INC.

*Employee Training* None identified.  
*Executive Compensation* None identified.

## Public Disclosure

Score: 3

*Annual Report* No climate change mention.  
*Securities Filings* No climate change mention.  
*Other Disclosure* Limited Brands has a Social Responsibility section on its website that includes information on environmental policies and programs. An “Energy and Climate” section has a brief overview of energy efficiency and logistics efforts. The company does not publish a separate sustainability report.  
*Carbon Disclosure Project* Answered Questionnaire (Public)  
*CDP6 Risk Disclosure* Limited Brands does not foresee being impacted by any pending climate legislation that is focused on direct emitters. However, the company may face increased fuel and energy costs, which could affect product and operational costs as well as its supply chain. The company also mentions physical risks, such as the rise in global temperatures and severe weather events, with hurricanes and flooding potentially causing the greatest risk to coastal stores. Finally, the company notes that reduced rainfall could harm cotton production and increase prices.  
*Public Policy* None identified.

## Emissions Accounting

Score: 10

*GHG Emissions Inventory* Year: 2007 Facility/Region: US only Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	21,827
Scope 2 (Indirect –Electricity)	400,845*
Scope 3	—
Travel	12,918
Logistics	247,632
Products	—
Supply Chain	—

\* Total global MWh of purchased electricity from renewable sources is based on US EPA eGRID sub-region generation resource mixes.

*Accounting Methods* Emission calculations were performed using the GHG Protocol except for domestic trucking emissions. These emissions were calculated using the US EPA FLEET model, which is required to be completed annually and submitted as part of the US EPA SmartWay program. Data is for calendar year 2007, except for a portion of energy use data, international transportation data and a portion of employee travel data, for which fiscal year 2007 data was used.

*External Verification* None identified.

*Certified CO<sub>2</sub> Offsets* None identified.

# LIMITED BRANDS, INC.

## Strategic Planning

Score: 8

<i>Emissions Reduction Targets</i>	Limited Brands does not currently have in place a formal emissions reduction plan. However, the company is focused on improving its energy efficiency, transportation networks and waste reduction. In September 2008, Limited Brands joined the US EPA Climate Leaders program, and will be working with the agency to conduct a GHG inventory and establish reduction goals.
<i>Energy Efficiency</i>	<p>Limited Brands is incorporating more energy-efficient lighting, roofing and other structural features to both new and existing buildings. The company has modified approximately 900 stores with more efficient lighting, reducing store electricity consumption by 50,000,000 kWh and reducing CO<sub>2</sub> emissions by more than 35,000 metric tons. Lighting has also been upgraded in home offices, distribution centers and call centers. In addition, approximately 125 HVAC units have been upgraded over the past two years, reducing electricity consumption by more than 1,500,000 kWh while cutting CO<sub>2</sub> emissions by more than 1000 metric tons.</p> <p>By installing new roofing systems on three distribution centers the company has also achieved a 15 percent reduction in energy consumption and costs. Limited Brands now plans to install the same energy-efficient roofing on the rest of its distribution centers.</p>
<i>Renewable Energy</i>	None identified.
<i>Emissions Trading</i>	Limited Brands is not currently required to participate in any mandatory emissions trading schemes and has no plans to participate in any voluntary trading schemes at this time.
<i>Products &amp; Services</i>	While Limited Brands does not see immediate commercial opportunities related to climate change, the company says that it is monitoring customer attitudes towards the environment and may adapt its operations or merchandise offerings to align with changing preferences. As one step, the company is increasing e-commerce sites to allow customers to shop without traveling.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	<p>In 2006, Limited Brands partnered with the US EPA SmartWay Transport Partnership program. This program works with shippers, freight carriers and logistics companies to reduce GHG emissions and air pollution caused by the transport of goods. One of the company's most successful projects has been its "All Rail" program. Beginning in 2005, the company began converting eastbound imported shipments arriving in Chicago from truck to rail using the eastern railroads. In 2007, container volume through this program increased by more than 50 percent and the EPA awarded Limited Brands with a SmartWay Excellence Award for the emissions reductions generated by this effort. Also in 2007, the company introduced a non-idling policy for on-site yard trucks and is currently investigating a tracking system for emission savings.</p> <p>Since 2005, Limited Brands has been a partner in the US EPA WasteWise program, which works with companies to increase waste management efforts to ultimately reduce GHG emissions. Apart from recycling programs, merchandise is stored and shipped in special cartons that use fewer raw materials, hold more merchandise and require less space on transportation vehicles.</p>

# ABERCROMBIE & FITCH Co.

NEW YORK STOCK EXCHANGE – ANF  
Apparel

Abercrombie & Fitch has not made public a formal strategy to address the risks and opportunities posed by climate change. There is no evidence of board or executive leadership with respect to climate change, and the company has not set greenhouse gas (GHG) emission reduction targets. The company did not comment on this profile by deadline.

**Summary Score: 0**

## Company Information

Abercrombie & Fitch (A&F) sells upscale men's, women's and children's casual clothes and accessories. A&F has 1,000-plus stores in North America and also sells via its catalog and online. The company also runs a chain of some 450 teen stores called Hollister Co., and a chain targeted at boys and girls ages seven to 14 called abercrombie. As of 2008, the company had approximately 99,000 employees.

### Contact Information

**Chairman/CEO:** Michael S. Jeffries

**Website:** [www.bercrombie.com](http://www.bercrombie.com)

**Address:** 6301 Fitch Path, New Albany, OH 43054, United States

## Board Oversight

**Score: 0**

<i>Board Committee/Member</i>	None identified.
<i>Board Role</i>	None identified.
<i>Board Training</i>	None identified.

## Management Execution

**Score: 0**

<i>CEO Leadership</i>	None identified.
<i>Company Strategy</i>	None identified.
<i>Executive Responsibility</i>	None identified.
<i>External Initiatives</i>	None identified.
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	None identified.

## Public Disclosure

**Score: 0**

<i>Annual Report</i>	No climate change mention.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	None identified.
<i>Carbon Disclosure Project</i>	No response.
<i>Public Policy</i>	None identified.

# ABERCROMBIE & FITCH Co.

---

## Emissions Accounting

Score: 0

<i>GHG Emissions Inventory</i>	None identified.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

---

## Strategic Planning

Score: 0

<i>Emissions Reduction Targets</i>	None identified.
<i>Energy Efficiency</i>	None identified.
<i>Renewable Energy</i>	None identified.
<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	None identified.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	None identified.



# THE COCA-COLA COMPANY

NEW YORK STOCK EXCHANGE – KO  
Beverages

Coca-Cola's Energy Management & Climate Protection strategy focuses on three principal components of operational impact: cold drink equipment, manufacturing plants and the system-wide (including bottling partners) vehicle fleet. The company's vending machines and coolers produce three times the estimated emissions of its manufacturing facilities and more than five times the emissions from its fleet. Therefore, Coca-Cola's sustainable refrigeration program has been the cornerstone of the company's climate protection efforts. The company has also set a goal "to grow our business, but not the carbon," which applies to system-wide manufacturing operations.

**Summary Score: 65**

## Company Information

The Coca-Cola Company owns four of the top five soft-drink brands (Coca-Cola, Diet Coke, Fanta and Sprite). The company makes or licenses more than 400 drink products in more than 200 nations. Other brands include Barq's, Minute Maid, POWERade and Dasani water, while the company also sells Groupe Danone's Evian and Dr Pepper Snapple Group brands in certain countries. Coke owns 35 percent of Coca-Cola Enterprises; 32 percent of Mexico's bottler Coca-Cola FEMSA; and 23 percent of European bottler Coca-Cola Hellenic Bottling. The company had approximately 90,500 employees as of December 2007.

### Contact Information

**Chairman:** E. Neville Isdell

**CEO:** Muhtar Kent

**Website:** [www.thecoca-colacompany.com](http://www.thecoca-colacompany.com)

**Address:** 1 Coca-Cola Plaza, Atlanta, GA 30313-2499, United States

## Board Oversight

**Score: 8**

### Board Committee/Member

Audit Committee and Public Issues and Diversity Review Committee

### Board Role

Coca-Cola's Audit Committee and Public Issues and Diversity Review Committee share responsibility for overseeing environmental-related policies and performance, including issues related to climate change. The Public Issues and Diversity Review Committee receives regular reports on issues of corporate responsibility from the executive-level Public Policy and Corporate Reputation Council.

### Board Training

None identified.

## Management Execution

**Score: 16**

### CEO Leadership

Chairman E. Neville Isdell says in his introductory letter to the company's 2006 *Corporate Responsibility Review*, "We have one planet, and many parts of it are under stress — from population growth, shrinking supplies of clean water, climate change and conflict...Working together is the only way that we can create solutions equal to the issues we all face." Isdell has spoken at numerous public forums on sustainability issues and climate change, such as the Global Compact Leaders Summit and the World Economic Forum. Isdell recently spoke at the Inaugural Greenpeace China Business Lecture where he issued a call to action to the commercial refrigeration industry to join Coca-Cola in investing in CO<sub>2</sub>-refrigeration systems to replace HFC-based systems. Isdell said, "We cannot wait for consumers or governments or

# THE COCA-COLA COMPANY

technology or price to move us towards sustainable solutions. Instead, we must use another lever to make progress — collective choice.”

## *Company Strategy*

Coca-Cola’s Energy Management & Climate Protection strategy applies to both the Coca-Cola Company and bottling partners. The strategy focuses on three principal components of operational impact: cold drink equipment, manufacturing plants and the system-wide vehicle fleet. Energy efficiency is viewed as a central part of each of these areas. In addition to this mitigation strategy, Coca-Cola has also adopted a climate change adaptation strategy focused on water – the Global Water Stewardship program. The company also updated in 2007 its Position Statement on Climate Protection, which states, “Across the Coca-Cola system, we recognize that climate change may have long-term direct and indirect implications for our business and supply chain.”

## *Executive Responsibility*

The Executive Leadership Team, representing Coca-Cola’s most senior management, reviews the company’s work and progress on climate change and other significant environmental matters. Jeff Seabright, Vice President, Environment and Water Resources (E&WR) is responsible for day-to-day performance across business operations and is supported by the E&WR Department. This department also includes dedicated, full-time resources to administer the company’s Energy Management & Climate Protection efforts. Subject matter briefings prior to semi-annual Environmental Advisory Board meetings are the principal mechanism for the Executive Leadership Team to review the company’s progress on energy management and climate protection. Senior leadership also engages on climate protection through the Public Policy and Corporate Reputation Council, which consists of both company and bottler representation.

## *External Initiatives*

Coca-Cola co-founded the global Refrigerants, Naturally! Initiative, tasked with promoting a shift to low or non-Global Warming Potential refrigerants in point-of-sale cooling technology. Coca-Cola has also partnered with the Alliance to Save Energy on the Watergy program in South Africa and with Solar Light for Africa on a solar water pumping and purification project in Uganda. Finally, Coca-Cola is also working with WWF on GHG emission reduction efforts as part of a broader partnership that also includes watershed protection and projects in the agricultural supply chain.

## *Employee Training*

In 2006 and 2007, Coca-Cola collaborated with WWF to co-host seven Greenhouse Gas (GHG) Mitigation Strategy workshops for key bottling partners around the world. In addition, the company offered energy efficiency training sessions on five continents and continues to make those training materials available for on-going local training sessions.

## *Executive Compensation*

Incentive based compensation is provided to Coca-Cola employees based on overall company financial performance, progress toward strategic business priorities and progress toward individual performance objectives. Attainment of GHG targets is one measure of progress for individuals managing climate change issues.

# THE COCA-COLA COMPANY

## Public Disclosure

Score: 7

*Annual Report* Coca-Cola's 2007 Annual Review discusses the company's environmental efforts, including progress in reducing water, packaging and energy impacts. The Chairman and CEO letter to shareholders states, "We also are scaling up our efforts to reduce carbon emissions. We are committed to growing our business, without growing our carbon footprint."

*Securities Filings* Although Coca-Cola does not specifically link water conservation issues to climate change in its 2007 Form 10-K, the company does cite water quality and quantity as a business risk. The company states, "As demand for water continues to increase around the world, we expect commitment and continued action on our part will be crucial in the successful long-term stewardship of this critical natural resource."

*Other Disclosure* Coca-Cola has reported on corporate responsibility strategies and programs through its website and an annual Corporate Responsibility Review. The latest report, covering January 2006 through July 2007, features overall performance metrics as well as a section on Energy Management and Climate Protection. In addition, the company has published an annual Environmental Performance report, last released in July 2007. Beginning in 2008, the company will issue one comprehensive Sustainability Report including metrics from the Environmental Performance report.

**Sustainability Report:** 2006 Corporate Responsibility Review, August 2007

**URL:** <http://www.thecoca-colacompany.com/citizenship/reporting.html>

**GRI Accordance:** G3 Draft

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* Coca-Cola states in its most recent response to the Carbon Disclosure Project that the company believes its "exposure to risk associated with climate change-related regulation is not material." The company also does not currently see material physical risks associated with climate change. However, Coca-Cola outlines some potential physical risks, including supply chain disruption, raw material price increases and water scarcity.

*Public Policy* Coca-Cola has engaged with policymakers in Europe on fluorinated gas issues and also endorsed the Bali Communiqué in November 2007. The Bali Communiqué calls on world leaders to establish a comprehensive, legally binding United Nations framework to tackle climate change. In addition, Coca-Cola has called for responsible GHG emissions standards through support of the United Nations Global Compact "Caring for Climate" program. As a signatory, Coca-Cola has committed to work to increase energy efficiency and reduce emissions from its operations as well as engage its global supply chain on climate change solutions.

# THE COCA-COLA COMPANY

## Emissions Accounting

Score: 13

GHG Emissions Inventory    Year: 2007    Facility/Region: Global    Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	1,953,000*
Scope 2 (Indirect – Electricity)	2,970,000
Scope 3**	—
Travel	55,000
Logistics	—
Products	—
Supply Chain	—

\* Figures above rounded to the nearest 1000.

\*\* Coca-Cola has estimated that a significant source of Scope 3 emissions is cold drink equipment, which have been estimated at 15 million metric CO<sub>2</sub>e tons per year. The company is in the process of updating its Scope 3 inventory.

*Accounting Methods*    Coca-Cola has begun to measure its Scope 3 emissions, although not all results have been reported when the company does not have system-wide information available. Scope 3 travel emissions include air travel associated with employee business travel, while the company has only collected data from less than 50 percent of its distribution volume.

*External Verification*    The company's 2006 inventory was verified by BECO following international standards ISO-19011: 2002 'Guidelines for quality and/or environmental management systems auditing' and the AA1000 assurance framework.

*Certified CO<sub>2</sub> Offsets*    None identified.

## Strategic Planning

Score: 21

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions	No CO <sub>2</sub> growth	2004	2015	System-wide manufacturing operations
Energy Efficiency	40–50%	2000	2010	Cold drink equipment

*Target Details*    Coca-Cola says its goal is “to grow our business, but not the carbon,” which applies to system-wide (including bottling partners) manufacturing operations. In addition, at the company's Atlanta, GA headquarters, a target was set in April 2007 to reduce energy consumption by 23 percent over the following 12 to 18 months. For its water protection strategy, the company has set a goal to return to communities and nature an amount of water equal to what it uses in all of its beverages and their production.

*Target Achievement*    The company's system-wide Energy Use Ratio (megajoules of energy per liter of product produced) showed 19 percent improvement between 2002 and 2007, when it was 0.46 MJ/liter. Coca-Cola estimates that the corresponding system-wide energy cost savings in 2007 were in excess of \$20 million. However, overall energy use increased 3 percent between 2004

# THE COCA-COLA COMPANY

and 2007 due in part to more energy-intensive products and on-site production of PET bottles. Resulting CO<sub>2</sub> emissions from energy consumption increased by 220,000 metric tons between 2004 and 2007 to 4.92 million metric tons.

## *Energy Efficiency*

Coca-Cola is focused on energy conservation efforts and investments in climate saving technologies, starting with a focus on operations and equipment. The company's principal emission reduction strategy is its eKOfreshment Sustainable Refrigeration Program to develop HFC-free refrigeration equipment, launched in 2000. By 2010, the company's cold drink equipment is expected to be 40-50 percent more energy efficient than models used in 2000. Coca-Cola has developed an energy management system (EMS-55) for cold drink equipment and over 1 million of these units have been deployed. This represents an energy savings of over 1 billion kWh and emission reduction estimated at 575,000 metric tons per year. The company has also deployed more than 26,000 units of HFC-free cold drink equipment and announced a scale-up of 100,000 units over the next three years. In addition, Coca-Cola placed 5,600 climate-friendly coolers and vending machines at the Beijing 2008 Olympic Games. The company has also converted to HFC-free insulation for all new coolers, eliminating 75 percent of direct emissions from the coolers.

For manufacturing operations, Coca-Cola has launched a multiyear energy efficiency investment program called Project eSKO, for which the company plans to invest \$11.8 million in 2008. The company has also developed an Energy-Efficiency Guidance Manual that includes best practices that can be implemented in offices and bottling plants. Several energy efficiency improvements have been made at the company's headquarters building in Atlanta, GA, including lighting and HVAC upgrades.

## *Renewable Energy*

By June 2006, nearly 50 percent of the company's bottling plants in China had installed solar thermal panels. This installation, along with other initiatives, has resulted in a 3 percent energy improvement through mid-2007.

## *Emissions Trading*

Coca-Cola has one concentrate plant in Drogheda, Ireland and one bottling partner plant that had been governed by the EU ETS. The concentrate plant has had an emissions surplus from 2005 to 2007, and Coca-Cola has developed provisional guidelines for the sale of surplus credits. Proceeds must be used either to reimburse project costs or channeled into other projects that deliver equal or greater carbon reductions. The Company is also involved in the development of projects in both China and Brazil that are expected to generate Clean Development Mechanism credits.

## *Products & Services*

Coca-Cola views its climate and water protection efforts as a source of potential competitive advantage. The company's Sustainable Refrigeration Program has prepared it for the transition toward HFC-free commercial refrigeration. Coca-Cola also believes it can educate consumers on its environmental initiatives and build brand loyalty. In 2008, the company established a collaboration with a retail customer in Japan to offer products that include carbon credits donated to the Japanese government toward their Kyoto Protocol obligation.

## *Research & Development*

Coca-Cola has developed in collaboration with Elstat Electronics an energy management system (EMS-55) for cold drink equipment. This software technology learns how a cooler is used and adjusts its operation to conserve energy, and the company sees broader applications for the technology as well. Coca-Cola has also spent nearly \$40 million over the past

## THE COCA-COLA COMPANY

eight years to identify and test alternative refrigerants to HFCs. In addition, the company collaborated with Georgia Tech's Enterprise Innovation Institute in its efforts to reduce water and energy consumption.

### *Supply Chain Management*

Coca-Cola has undertaken a variety of carbon footprint exercises to better measure the carbon impact upstream and downstream in the company's product/package life cycle. In September 2007, Coca-Cola joined eight other companies to use a draft product carbon footprinting standard developed by the Carbon Trust, Defra and BSI British Standards. The companies agreed to use the standard to calculate the embodied carbon emissions of selected products. In addition, Coca-Cola has a sustainable design program, known as e3, which focuses on improving efficiency, life cycle effectiveness and eco-innovation for product packaging.

For its vehicle fleet, Coca-Cola tracks a system-wide metric of fuel economy: liters of diesel per 1000 liters of product distributed. Coca-Cola's bottling partners expanded their fleet of diesel-electric hybrid delivery trucks in 2007 and extended their commitment for 2008.



# MOLSON COORS BREWING COMPANY

NEW YORK STOCK EXCHANGE – TAP  
Beverages

Molson Coors is increasing its focus on energy conservation at both its breweries and offices, as well as through considerations of the supply chain impact of its products. Coors, the US business, has set a 12 percent emissions reduction target as part of a three year partnership with the US EPA Climate Leaders program. Operations in the UK and Canada have also set energy use reduction targets. The company is also looking to take advantage of a growing trend away from corn-based ethanol by becoming the first major brewer in the US to convert waste beer into ethanol.

**Summary Score: 58**

*Note: Following the merger of Coors and Miller in June 2008, the new company is reviewing legacy Coors and Miller targets and will publish new targets by the end of 2008. All references to the US business in this profile are for legacy Coors US and accurate as of June 31<sup>st</sup> 2008.*

## Company Information

Molson Coors is one of the largest brewers by volume in the world. The company sells more than 40 percent of beer in the Canadian market and operates in the US through MillerCoors, a joint venture with SABMiller. Molson Coors also operates in the UK and other European markets through Coors Brewers Limited. Its global footprint includes more than 15,000 employees, 18 breweries, distribution in more than 30 countries and a portfolio of over 40 brands, including Molson Canadian, Coors Light and Carling.

### Contact Information

**Chairman:** Eric H. Molson  
**CEO:** Peter Swinburn

**Website:** [www.molsoncoors.com](http://www.molsoncoors.com)

**Address:** 1225 17th St., Denver, CO 80202, United States

## Board Oversight

**Score: 8**

### Board Committee/Member

Audit Committee

### Board Role

The full Board through the Audit Committee is responsible for reviewing energy and greenhouse gas (GHG) reduction targets and progress against these targets. Global reporting for climate change and other aspects of corporate responsibility and sustainability are reported to the Board through the Audit Committee once a year.

### Board Training

None identified.

## Management Execution

**Score: 13**

### CEO Leadership

CEO Peter Swinburn has a message on the importance of corporate responsibility to Molson Coors on the company's website. In September 2008, the company endorsed the CEO Water Mandate, a call to action for businesses to address water sustainability in their operations and supply chain.

### Company Strategy

Molson Coors says it continually seeks cost-effective improvements in its operations that result in more efficient use of energy, reductions in emissions and improvements in environmental performance. Since the merger of Molson Brewing Company and

# MOLSON COORS BREWING COMPANY

Coors Brewing Company in 2005, the company has been focused on establishing energy conservation standards at its breweries and is now increasingly paying attention to additional energy efficiency options at its offices and through business travel reductions. The company has identified the environment, particularly energy conservation and water stewardship, as a strategic priority for 2008 and set company-wide reduction targets. The company has also issued a formal Energy Policy along with its Quality, Environmental, Health & Safety Policy.

## *Executive Responsibility*

The Executive Leadership Team (ELT), directly reporting to the CEO, establishes and reviews energy and GHG reduction targets and is responsible for performance. Global reporting for climate change and other aspects of corporate responsibility are reported to the ELT twice a year through business units to the Vice President Global Alcohol Policy and Corporate Responsibility, who in turn reports to the Global Supply Chain Officer and Chief Legal Officer.

In the US, accountability is shared by the Chief Legal Officer, who oversees the environmental portion of corporate responsibility initiatives, and the Chief Supply Chain Officer, who oversees manufacturing operations. Energy efficiency and the company's GHG reduction goal are also tracked at the CEO level as an environmental metric on the US scorecard and US Strategic Plan. In the UK, the Supply Chain Director, who reports directly to the Board of Coors Brewers, chairs the Environmental, Health and Safety Strategy group that meets on a quarterly basis to review performance and strategy.

Meanwhile, in Canada the National Environmental Health and Safety Committee, chaired by the Chief Legal and Corporate Affairs Officer, is accountable for these activities. The officer reports directly to the President and CEO of Molson Canada. Molson Canada created a national energy committee that is committed to reduce energy use by setting targets and developing strategies to meet those targets. Finally, the company's corporate risk management team and those responsible for procurement, operations, distribution and sales all assess and seek to manage the risks resulting from variability in weather and adverse events.

## *External Initiatives*

In the US, Coors is a member of the US EPA Climate Leaders program and in the UK Coors Brewers is partnering with the Carbon Trust. The company also participates in Wal-Mart and Tesco supply chain programs to determine the carbon footprint of certain products. Finally, Molson Coors is also a member of the Beverage Industry Environmental Roundtable, which is working on standards for calculating lifecycle GHG emissions specific to the beverage industry.

## *Employee Training*

In March 2008, Molson Coors participated in Earth Hour promoting energy conservation among employees at all breweries and offices. In April 2008, all Canadian plants participated in an energy awareness week and launched a conservation communication campaign 'The Power to Make a Difference'.

## *Executive Compensation*

Energy reduction targets are included in the Global Chief Supply Chain Officer's performance plan each year. Climate change issues are included in the incentive mechanisms of his direct reports and the functional leadership of EHS, including brewery managers. Coors also has an incentive program for production teams called Focused Improvement. Energy reduction was a focus for 2007 and project teams achieving reductions were rewarded through incentive plans.

# MOLSON COORS BREWING COMPANY

## Public Disclosure

Score: 7

<i>Annual Report</i>	In the Environmental Stewardship section of Molson Coors' 2007 Annual Message the company states, "We are working to establish overall standards for energy conservation, water stewardship and waste reduction/recycling at our breweries in the United States, Canada and the United Kingdom."
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	In 2007, Molson Coors began reporting its social and environmental performance on <a href="http://www.molconcoors.com/responsibility">www.molconcoors.com/responsibility</a> . The website includes Environmental Responsibility and Performance sections with trend data on CO2 emissions, water, energy and waste metrics globally, as well as by country and individual facility. The company does not publish a separate sustainability report.
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	Molson Coors recognizes that increased governmental regulation, through emissions limits, energy efficiency standards or increased taxes, could increase its cost of production. The company assesses current and expected regulatory program in its major markets in its most recent Carbon Disclosure Project response. Of particular note is the company's statement: "We anticipate the federal government [in the US] will regulate GHG emissions in the time period of 2009-2010 and implement an economy-wide cap and trade system." In addition, climate change-induced weather changes could affect the company's "availability, quality and price of agricultural products, our packaging suppliers, our water supplies, our brewery operations, our distribution chains, retailers, and also the demand for our products by consumers." Finally, the company also identifies specific physical risks for individual locations, such as its Golden facility in the US being dependent on mountain snow pack for process water and flooding risk at the company's Burton brewery in the UK.
<i>Public Policy</i>	Molson Coors says its Global Vice President for Corporate Responsibility engages with the Carbon Disclosure Project and other stakeholders regarding global trends in carbon policy and reporting. Business divisions also carry out dialogues with public policy makers and interest groups regarding the effectiveness of current policies and likely future directions.

## Emissions Accounting

Score: 11

*GHG Emissions Inventory*    **Year:** 2007    **Facility/Region:** Global    **Protocol:** GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
<b>Scope 1 (Direct)</b>	<b>746,639</b>
<b>Scope 2 (Indirect –Electricity)</b>	<b>507,924</b>
<b>Scope 3</b>	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

# MOLSON COORS BREWING COMPANY

<i>Accounting Methods</i>	In the US, the Coors inventory was developed using the EPA Climate Leaders GHG Inventory Protocol. Emissions reporting in the UK is governed by the Climate Change Agreement and administered by the British Beer and Pub Association. The boundaries set under the Agreement include electricity and fuel use by the company's three brewing facilities and 1 barley malting plant in the UK. In Canada, emissions are calculated using Canada's National Greenhouse Gas inventory report 1990-2005, issued April 2007.
<i>External Verification</i>	In the US, Coors emission inventory was audited by the EPA through the Climate Leaders Program. The verification of Coors Brewers' UK production site data is a regulatory requirement under the EU ETS and the Climate Change Levy. The Molson Canada inventory was prepared by Finn Projects but it is not currently externally verified.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score: 19

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Intensity)</b>	<b>12% indexed to production</b>	<b>2005</b>	<b>2010</b>	<b>US only</b>
<b>Energy Use</b>	<b>4%</b>	<b>2007</b>	<b>2008</b>	<b>Global</b>

*Target Details* Molson Coors seeks continued year-on-year emission reductions, achieved through individual targets for facilities, divisions and the overall enterprise. The US business has set a 12 percent emissions reduction goal indexed to production by 2010 as part of a three year partnership with the US EPA Climate Leaders program. In addition, operations in the UK and Canada have set energy use reduction targets. Coors Brewers has set a target to reduce 2007 energy use by 3 percent by the end of 2008 and Molson Canada has set a 2008 energy reduction target of 3-5 percent. The company also plans to sign up to the US Department of Energy's Save Energy Now initiative this year and drive a 25 percent reduction in industrial energy intensity over the next ten years.

*Target Achievement* Molson Coors reports a reduction of 79,751 metric tonnes CO<sub>2</sub> across its businesses between 2006 and 2007. In addition, between 2006 and 2007 total CO<sub>2</sub> emissions were reduced by 7 percent in the UK, 6 percent in the US and 11 percent in Canada. Over the same period, total energy use was reduced by 7 percent in the UK, 6 percent in the US and 2 percent in Canada.

*Energy Efficiency* Molson Coors has actively reduced energy use from employee travel, office lighting and HVAC improvements. Breweries worldwide also measure their energy usage and benchmark their results with other breweries through the Brewing Research Institute. In the US, each plant has designated an employee to participate in the global utilities council, which shares best practices across the company. In the UK, Coors Brewers has focused on energy efficient lighting and process modifications.

In 2007, the company's Montreal Brewery was awarded the Leadership Award for Metering and Tracking from the Canadian Industry Program for Energy Conservation. In early 2008, Excel Energy awarded Coors Brewing Company the winner of the Overall Electricity Savings category at the 2008 Energy Efficiency Expo. Also this year, Coors Brewing Company's End

# MOLSON COORS BREWING COMPANY

Plant received an Energy Champion award through the US Department of Energy's Save Energy Now program rewarding the plant for over 15 percent in total energy savings.

In terms of employee travel, all businesses review corporate vehicle programs to promote efficient use of fuel. The US business recently joined the Smart Way Transportation Partnership of the US EPA and the Corporate Center office in Denver, Colorado, provides public transportation EcoPasses to all its employees.

*Renewable Energy* Coors Brewers' Tadcaster Brewery in the UK is using biogas from anaerobic digestion to offset fossil fuel usage in its boiler plant. In the US, the company's new Shenandoah brewery is utilizing methane in two biogas boilers.

*Emissions Trading* Three Coors Brewers brewery sites and a malting site in the UK are covered by EU ETS. The sites were allowed to opt out of Phase I of the EU ETS as the UK is covered by an equivalent scheme but the facilities are in Phase II. These facilities' emissions have been below their allowances to date and the company has chosen to bank any remaining allowances.

*Products & Services* At the company's Golden, Colorado brewery, Coors processes waste beer and other liquids to produce fuel-grade ethanol. The company is the first major brewer in the US to convert waste beer into ethanol. In 2007, Coors produced 2.7 million gallons of ethanol for sale in Denver, a 68 percent increase from 2005. The company sees a competitive advantage in that its production process does not divert raw materials from the food supply. Coors is considering the viability of expanding this business to additional production facilities.

*Research & Development* Coors is looking to develop new barley varieties that require less water and better withstand drought conditions, an initiative that could help with climate change adaptation efforts. In addition, the company has devoted extensive resources to cellulosic ethanol research at its Golden, Colorado facility.

*Supply Chain Management* Molson Coors is developing Supplier Guiding Principles and a program to recognize sustainability within its entire supplier network as part of its broader Supplier Excellence Awards program. Specifically on climate change issues, Coors in the US is working with suppliers and industry partners on managing supply chain GHG emissions. Molson Coors is working with the Beverage Industry Environmental Roundtable to define boundaries and methodologies for calculating lifecycle GHG emissions specific to the beverage industry. Meanwhile, Coors Brewers in the UK is working with the Carbon Trust, DEFRA and BSI British Standards on piloting the draft Publicly Available Specification 2050, a standard for assessing the lifecycle GHG emissions of goods and services. Finally, the company is also working to optimize distribution routing and reduce transportation emissions.

Diageo CEO Paul Walsh is chair of the company's Corporate Citizenship Committee, ultimately responsible for environmental initiatives. The company has made significant strides in reporting on its environmental impact and estimating greenhouse gas (GHG) emissions for its full supply chain. Diageo is also making a major investment in innovative biomass energy technologies at its Cameronbridge, Scotland grain distillery and has set a target to reduce absolute GHG emissions worldwide by 50 percent by 2015.

**Summary Score: 48**

## Company Information

Diageo is the world's largest producer and distributor of alcoholic drinks. Its beers and distilled spirits include Guinness Stout, Harp Lager, Johnnie Walker Scotch, José Cuervo tequila, Tanqueray gin and Smirnoff vodka. The company gained the Captain Morgan, Crown Royal, and VO Canadian brands through its purchase of Seagram's drinks business from Vivendi (formerly Vivendi Universal). The company had approximately 24,373 employees as of 2008.

### Contact Information

**Chairman:** Franz Humer

**CEO:** Paul S. Walsh

**Website:** www.diageo.com

**Address:** 8 Henrietta Place, London, W1G 0NB, United Kingdom

## Board Oversight

**Score: 4**

### Board Committee/Member

None identified.

### Board Role

The Board reviews progress on environmental and sustainability issues each year when they are presented with annual performance data by the executive-level Corporate Citizenship Committee. They may also discuss climate change issues as part of particular reviews of sustainability issues more generally.

### Board Training

There is an induction program for new directors, in which orientation training is provided on the business, including environmental and social responsibility policies and practices.

## Management Execution

**Score: 14**

### CEO Leadership

CEO Paul Walsh is chair of the company's Corporate Citizenship Committee, which is responsible for maintaining an environmental policy and monitoring achievements in this area. In their introductory letter to the company's most recent corporate citizenship report, Chairman Franz Humer and CEO Paul Walsh highlight the need to lead by example and the company's signing last year of the Bali Communiqué on climate change and the CEO Water Mandate.

### Company Strategy

Diageo issued a formal environmental policy in 2003 that was updated in 2005. The policy includes the following company-wide standards applicable to climate change:

- All businesses shall be aware of the potential impact of generating greenhouse gases and set targets for the reduction of CO<sub>2</sub> equivalent emissions.
- All businesses shall have programs to ensure that there is continuing awareness of non renewable energy use and conservation. All business units shall monitor consumption and establish appropriate energy reduction targets.



Diageo's GHG emission reduction strategy is to reduce emissions through efficiency initiatives and new processes/technologies, switch to renewable energy sources and offset remaining emissions. The company also states in its *Corporate Citizenship Report 2008*, "The prospect of climate change also presents us with opportunities, most particularly a competitive advantage if we respond to these issues more effectively than others in our industry."

## Executive Responsibility

Diageo's Corporate Citizenship Committee, chaired by CEO Paul Walsh, has oversight of climate change-related policies and strategies. Meanwhile, the Diageo Environmental Working Group, which was reconstituted at a more senior level in 2008, leads the implementation and monitoring of environmental improvements, including those related to climate change. The team is led by the managing director of Diageo Supply, includes functional leaders from across the business and reports progress to the Corporate Citizenship Committee. In addition, the group is supported by an environmental leadership team covering production sites and by a new sustainable packaging working group. Each business unit carries out risk assessments at least quarterly, which may include analysis of climate-related risks, and mitigation plans are reviewed through regional Risk Management Committees.

## External Initiatives

Diageo has worked as a member of the Beverage Industry Environmental Roundtable on developing consistent measurement and reporting approaches. The company also recently participated in an Irish Business Employers Confederation conference on carbon footprinting,

## Employee Training

Each office with more than 50 employees is tasked with raising employee awareness of environmental policies and improving environmental performance. In addition, to mark World Environment Day this year Diageo employees made 5,766 commitments to five voluntary actions to reduce their personal environmental footprints.

## Executive Compensation

Diageo says it includes environmental targets in the personal objectives of relevant staff affecting compensation.

## Public Disclosure

Score: 6

### Annual Report

No climate change mention.

### Securities Filings

No climate change mention.

### Other Disclosure

Diageo's *Corporate Citizenship Report 2008* identifies environmental management, including climate change mitigation, as a priority for the company. The report includes a detailed discussion of climate-related risks and mitigation initiatives. The company also reports GHG emissions and water use data by region.

**Sustainability Report:** *Corporate Citizenship Report 2008*, August 2008

**URL:** <http://www.diageo.com/en-row/CorporateCitizenship/CorporateCitizenshipReports/2008/>

**GRI Accordance:** G3 Level A+ Third Party Checked

## Carbon Disclosure Project

Answered Questionnaire (Public)

## CDP6 Risk Disclosure

Diageo says that regulation of GHG emissions will reinforce the company's "drive to be increasingly energy efficient and to find lower-carbon energy solutions." The company also

recognizes that its operations could be “adversely affected by major weather and ecosystem changes.” In particular, climate change could affect Diageo’s ability to source raw materials including water and crops, manufacture products or distribute its brands.

*Public Policy*

In November 2007, the company endorsed the Bali Communiqué, an initiative of the Prince of Wales’s Corporate Leaders Group on Climate Change calling for a legally-binding international framework to tackle climate change.

## Emissions Accounting

Score: 13

*GHG Emissions Inventory*

**Year:** FY2008

**Facility/Region:** Global

**Protocol:** GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
<b>Scope 1 (Direct)</b>	<b>625,000</b>
<b>Scope 2 (Indirect –Electricity)</b>	<b>102,000</b>
<b>Scope 3</b>	—
Travel	25,500
Logistics	420,000
Products	240,000
Supply Chain	820,000*

\* Extrapolated estimate for entire business based on a 2007 supply chain study of the Johnnie Walker brand only.

*Accounting Methods*

Diageo collects environmental data monthly from all 105 production sites and annually from 41 large offices. GHG emissions from fuel combustion are calculated using standard calorific values and emission factors. Indirect emissions are calculated from emission factors published for countries by the GHG Protocol and separately for US states and Canadian provinces using government-published factors.

*External Verification*

Energy consumption and calculated emissions are subject to an internal audit. In addition, at relevant sites, data is subject to audits under government programs, IPPC licences, ISO14001 accreditation processes and the EU ETS. Starting in 2008, all data will be subject to a single external verification process.

*Certified CO<sub>2</sub> Offsets*

None identified.

## Strategic Planning

Score: 11

*Emissions Reduction Targets*

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Absolute)</b>	<b>50%</b>	<b>2007</b>	<b>2015</b>	<b>Global</b>

*Target Details*

In 2008, Diageo set absolute emission reduction targets instead of intensity targets for the first time. The company says that this methodology allows for a more meaningful quantification of the environmental benefits of its initiatives. The company’s GHG emission reduction target is to reach 364,000 metric tonnes CO<sub>2</sub> by 2015.

<i>Target Achievement</i>	Diageo's <i>Corporate Citizenship Report 2008</i> includes GHG emission data from 2004 through 2008, showing a reduction in emissions in both absolute and intensity terms over this period. While overall Scope 1 and 2 emissions have fallen from 791,000 to 727,000 metric tonnes CO <sub>2</sub> , emissions intensity has been reduced from 255 to 216 grams CO <sub>2</sub> per liter of product over the same period.
<i>Energy Efficiency</i>	Diageo is hoping to reduce emissions from business travel by encouraging videoconferencing and has installed new, advanced video studios in London, Norwalk and Singapore.
<i>Renewable Energy</i>	Diageo is installing or testing a number of renewable technologies to provide energy for its plants. In South Korea, the company has installed solar thermal panels and an absorption chiller, saving 75 percent of the site's diesel consumption and nearly 20 percent of its electricity use. CO <sub>2</sub> emissions are estimated to be reduced by a third. In an office in Australia, Diageo has fitted photovoltaic solar panels to satisfy all energy use. In addition, as part of the largest single investment in renewable technology by a non-utility in the UK, work is underway at the company's grain distillery at Cameronbridge, Scotland to install new equipment, which will exploit the energy potential of waste materials, including wastewater. The \$120 million project will provide 98 percent of the steam and 80 percent of the electricity needed by the distillery and is a first in integrating anaerobic digestion and biomass conversion technologies on a commercial scale. The company is also planning a new distillery in Morayshire, Scotland that will feature green power technologies.
<i>Emissions Trading</i>	In 2007, the five Diageo sites in Ireland and the UK included in Phase I of the EU ETS reported total GHG emissions within their allocations, resulting in a small number of surplus, tradable allowances.
<i>Products &amp; Services</i>	Diageo sees potential commercial opportunities related to climate change if certain raw materials become more readily available or a competitive advantage is gained through increased reliance on renewable energy for production processes. One particular project the company is pursuing is related to the branding of its Gleneagles hotel and golf course complex in Scotland. In 2008, the company introduced new environmental measures designed to make Gleneagles a leader in responsible tourism. Gleneagles aims to become carbon neutral over the next two years and plans to encourage environmental awareness among guests.
<i>Research &amp; Development</i>	Diageo recognizes that achieving its environmental targets will require new product processes and technologies. The company is working on possible future technology applications in the digestion of effluent to produce burnable methane, using heat from burning solid waste, wind and solar energy and water and waste recycling.
<i>Supply Chain Management</i>	Diageo has a set of supplier standards including environmental factors; satisfying these standards are now a formal part of the company's qualification process for raw material suppliers. To confirm that suppliers maintain these standards, the company uses the independent Suppliers Ethical Data Exchange, or Sedex, through which participating suppliers post self-assessments online. In addition, in 2008 Diageo established a new working group to focus on sustainable packaging.

InBev has established an extensive management structure to address environmental and climate change-related issues, including the company's Chief Supply Officer and a Global Environment Department. The company is focused on eco-efficiency, energy efficiency and renewable energy projects at its production plants to reduce greenhouse gas (GHG) emissions. Of particular note is progress the company's Latin American operations have made in using biomass resources to satisfy production energy needs. The company is also supporting development of the Kyoto Protocol's Clean Development Mechanism through emission reduction projects in Brazil and Paraguay.

**Summary Score: 38**

## Company Information

InBev is one of the world's largest brewers, owning a collection of more than 200 local beer brands across the globe. The company operates facilities in more than 30 countries. In 2004, the Belgian brewer merged with Brazil's Companhia de Bebidas das Américas (AmBev). In 2008, its takeover offer for Anheuser-Bush was accepted. This profile applies to InBev policies and operations only.

### Contact Information

**Chairman:** Peter Harf  
**CEO:** Carlos Brito

**Website:** [www.inbev.com](http://www.inbev.com)

**Address:** Brouwerijplein 1, 3000 Leuven, Belgium

## Board Oversight

**Score: 3**

### Board Committee/Member

None identified.

### Board Role

Corporate Citizenship forms a part of the company's Corporate Affairs Strategy (including some elements of environmental performance), which was approved by the Board in 2006. The Board and Executive Board of Management receive regular briefings on the company's citizenship and environmental progress.

### Board Training

None identified.

## Management Execution

**Score: 9**

### CEO Leadership

CEO Carlos Brito's introductory letter to the 2007 Global Citizenship Report states, "Our focus on sustainability is central to the InBev culture and is embedded in our way of doing business. With this in mind, we are sharing our forward looking targets so that we can continue improving internal performance while increasing external accountability."

### Company Strategy

InBev has defined water, energy and climate change, byproducts and waste as the company's key environmental issues. The company believes that "businesses should support a precautionary approach to environmental challenges." InBev manages environmental issues through its Voyager Plant Optimization (VPO) management system, which promotes energy, water and recycling efficiency in operations, as well as through an Environmental Policy and Operational standards.

# ANHEUSER-BUSCH INBEV NV

<i>Executive Responsibility</i>	At the Executive Board of Management (EBM) level, the Chief Supply Officer, the Chief People & Technology Officer and the Chief Legal and Communications Officer are responsible for environmental, health and safety matters. The Chief Supply Officer is specifically responsible for environmental issues across the company. Supporting the Chief Supply Officer are the Vice President Technical, the Global Environment Director and the Global Environment Department. The Global Environmental Department's responsibilities include definition of policies and objectives, environmental auditing and reporting, as well as participation in process and product development. In addition, a Head of Corporate Social Responsibility was appointed in June 2008.
<i>External Initiatives</i>	None identified.
<i>Employee Training</i>	Corporate Citizenship, including some elements of environmental performance, have been incorporated into the CEO's quarterly briefing sessions for global headquarters staff, with an open invitation for employees to ask questions.
<i>Executive Compensation</i>	The annual InBev targets for waste recycling, energy, fuel and water consumption are cascaded for all plants, including individual targets for environmental and utilities managers.

## Public Disclosure

Score: 10

<i>Annual Report</i>	InBev's 2007 Annual Report includes a section on the environment that states, "Climate change is predicted to have serious and far-reaching environmental, economic, and social consequences. For our business it may directly impact on crop outputs and costs, and the quality of our essential raw materials. It may also lead to limits on the supply of water, rising energy prices, unpredictable weather affecting our breweries and supply chain, and of course changes in consumer demand. In the face of these challenges, we want to be part of the solution by reducing our carbon footprint through energy efficiency and smarter management and sourcing of energy."
<i>Securities Filings</i>	InBev does not file a Form 10-K or 20-F with the US Securities and Exchange Commission.
<i>Other Disclosure</i>	<p>InBev's third annual Global Citizenship Report includes a section entitled "Managing our Environmental Performance" that addresses energy use and climate change, among other issues. The report contains extensive data on the past three years for production plant energy consumption and CO<sub>2</sub> emissions.</p> <p><b>Sustainability Report:</b> <i>Citizenship '08</i>, September 2008 <b>URL:</b> <a href="http://www.inbev.com/pdf/InBev_corpo_citizenship08.pdf">http://www.inbev.com/pdf/InBev_corpo_citizenship08.pdf</a> <b>GRI Accordance:</b> G3 – B Self Declared</p>
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	InBev recognizes that climate change could have far-reaching consequences on society as a whole and its business, specifically on raw material and water supplies as well as rising energy prices. The company also sees climate change potentially affecting consumer habits and preferences. Extreme weather events could also impact production, transportation or delivery of the company's products.
<i>Public Policy</i>	InBev says it engages with policymakers on both national and international levels directly and via trade associations.

# ANHEUSER-BUSCH INBEV NV

## Emissions Accounting

Score: 7

GHG Emissions Inventory    Year: FY2007    Facility/Region: Some facilities    Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	2,699,135
Scope 2 (Indirect –Electricity)	678,695
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

*Accounting Methods*    For 2007, InBev reported data from 124 production plants worldwide. The company measures CO<sub>2</sub> from fuel use in its boilers and purchased electricity, but does not currently include emissions from transport, the brewing process and HFC related emissions. In 2008, the company plans to study collection of Scope 3 emissions data.

*External Verification*    None identified.

*Certified CO<sub>2</sub> Offsets*    None identified.

## Strategic Planning

Score: 9

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Intensity)	10% per hectoliter of product	2008	2010	Global production
Energy Use	10% per hectoliter of product	2008	2010	Global production

*Target Details*    InBev has set a target to reduce CO<sub>2</sub> emissions from production activities to 11.69 Kilograms per hectoliter of beer and soft drinks produced by 2010. In 2007, this metric was at 12.99 Kg/hl down from 15.04 Kg/hl in 2005. The company has also set a target to reduce overall energy use in production activities to 0.12 Gigajoules per hectoliter of beer and soft drinks produced by 2010. In 2007, this metric was at 0.14 GJ/hl down from 0.18 GJ/hl in 2005. In addition, the company has annual targets per plant for fuel and electricity consumption reduction. The company sets target baselines using at a minimum the government accepted baseline in each country. Annual GHG emission targets are fixed based on fuel consumption and energy targets. The company is also targeting water use for beer and soft drink plants to 3.75 hl/hl.



# ANHEUSER-BUSCH INBEV NV

<i>Target Achievement</i>	<p>Over the last three years, InBev has reduced the amount of energy required to produce a hectoliter of product by 22.2 percent and the amount of CO<sub>2</sub> emissions by 13.6 percent. Absolute CO<sub>2</sub> emissions were up 16.8 percent between 2006 and 2007, partially due to an additional 32 plants reporting data for the first time in 2007. In addition, efforts to switch to renewable energy sources at several plants have led to GHG emission reductions. For example, in Brazil CO<sub>2</sub> emissions have decreased by 32 percent over the last five years.</p>
<i>Energy Efficiency</i>	<p>InBev has instituted a number of energy efficiency initiatives across different regions and facilities. These include using high performance boilers, replacing heavy oil with natural gas and adding automation controls to NH<sub>3</sub> compressors. For example, for its Latin America North business division the company invested \$12 million over 2007-8 for efficiency upgrades and projects.</p> <p>In 2008, InBev is conducting a carbon management study to identify opportunities related to GHG emissions and the company's carbon footprint in the UK and China. The study will generate recommendations for improving emissions management across the company.</p>
<i>Renewable Energy</i>	<p>InBev generates a small but growing proportion of its power from renewable energy sources such as biogas and biofuel, particularly at plants in Argentina, Brazil and Uruguay. In Argentina, 24,221 tons of CO<sub>2</sub> have been cut since 2004 by substituting heavy oil with eucalyptus sawdust as boiler fuel. Plants in Brazil use on-site biogas-to-energy systems and in Western Europe seven breweries produce biogas for heat and electricity. Biomass represents 34 percent of total fuel consumed in Brazil. Overall, the move to biomass fuel will lead to emissions savings of 174,000 tons of CO<sub>2</sub> in 2007 and a cost saving of 6.6 million Euros. Future investments include a new state-of-the-art boiler house for the Leuven brewery in Belgium and CO<sub>2</sub> recovery optimization at the Jupille brewery in Belgium.</p>
<i>Emissions Trading</i>	<p>All of the company's Western European plants are included in the Phase II EU ETS emissions trading scheme. Some UK breweries have joined the British Beer &amp; Pub Association Climate Change Agreement, which allows an 80 percent exemption to the UK Climate Change Levy if members enact energy efficiency measures. In addition, in 2007 the company's Latin America North operations launched the first ever beverage company Clean Development Mechanism project to be approved by the Brazilian government. The project replaces fuel oil with solid biomass from rice husks for steam generation and is expected to reduce CO<sub>2</sub> emissions by 188,000 tonnes over the next seven years. Another CDM project is seeking approval at the company's Ypané brewery in Paraguay.</p>
<i>Products &amp; Services</i>	<p>While InBev does not see direct climate change opportunities for its products and services, the company is involved in generating emission reduction credits through the Clean Development Mechanism of the Kyoto Protocol.</p>
<i>Research &amp; Development</i>	<p>None identified.</p>
<i>Supply Chain Management</i>	<p>None identified.</p>

# WAL-MART STORES, INC.

NYSE – WMT  
Big Box Retail

With the proactive support of CEO Lee Scott, Wal-Mart has made significant strides in reducing emissions from all parts of the company – including its own operations, its supply chain, and its products. The company has set aggressive targets to reduce both energy consumption and greenhouse gas (GHG) emissions and has implemented a robust strategy to achieve its goals. Wal-Mart has also taken a proactive role in supporting regulatory measures to address climate change, working with members of the US Congress to design an efficient cap-and-trade system. In addition, Wal-Mart is engaging with suppliers to drive the company's high standards for energy efficiency and low-carbon solutions through the company's complete supply chain.

**Summary Score: 69**

## Company Information

Wal-Mart is the world's largest retailer. The company's operations comprise three business segments: Wal-Mart Stores, Sam's Club and International. As of September 2008, the company operates 2576 supercenters, 914 discount stores, 594 Sam's Clubs and 143 Neighborhood Markets in locations around the world. Out of the 7437 units the retailer operates, 3210 are located outside of the United States. Wal-Mart and its subsidiaries employ approximately 2 million associates worldwide.

### Contact Information

**Chairman:** S. Robson Walton  
**CEO:** H. Lee Scott Jr. [*Lee Scott will be replaced by Mike Duke on February 1, 2009.*]  
**Website:** [www.walmartstores.com](http://www.walmartstores.com)  
**Address:** 702 S.W. 8<sup>th</sup>St. Bentonville, AR, United States

## Board Oversight

**Score: 0**

<i>Board Committee/Member</i>	None identified.
<i>Board Role</i>	None identified.
<i>Board Training</i>	None identified.

## Management Execution

**Score: 16**

<i>CEO Leadership</i>	Wal-Mart CEO Lee Scott has emerged as a climate change leader in his industry, spearheading the company's climate change strategy by announcing new company-wide goals to reduce GHG emissions, improve energy efficiency and promote renewable energy. Mr. Scott discusses the company's goals and progress on climate change in Wal-Mart's sustainability progress report, and also briefly mentions the company's energy efficiency goals in his annual letter to shareholders. In a 2006 interview, Mr. Scott stated: "I...embraced this idea that the world's climate is changing and that man played a part in that, and that Wal-Mart can play a part in reducing man's impact. We recognized that Wal-Mart had such a footprint in this world, and that we had a corresponding part to play in sustainability." In January 2008, at Wal-Mart's annual kick-off meeting comprised of more than 7000 managers, Mr. Scott laid out the company's goals to improve the energy efficiency of its operations and products. Mr. Scott has also participated in public forums to discuss Wal-Mart's sustainability efforts,
-----------------------	---

## WAL-MART STORES, INC.

including the Wall Street Journal's ECO:nomics conference in California in March 2008. In addition, at the company's June 2008 annual shareholder meeting, Mr. Scott stated: "There are very clear trends that the retail industry and the world will have to confront -- the aging of the global population, a multi-polar balance of power, income inequality, the disruptive power of technology, increased demand for energy ... to name a few. Wal-Mart can play a role in reducing the world's dependence on oil and other high-carbon sources of energy. Our leadership in sustainability will give customers and suppliers everywhere the ability to be more energy efficient and therefore more energy independent."

### *Company Strategy*

In October 2005, Wal-Mart announced three "simple and straightforward" sustainability goals for the company: (1) to be supplied 100 percent by renewable energy; (2) to create zero waste; and (3) to sell products that sustain the environment. To reduce its greenhouse gas emissions, Wal-Mart set three goals, including:

- Making its fleet 100 percent more efficient by 2015 when compared to the 2005 baseline fleet efficiency; and to increase truck fleet efficiency by 25 percent by 2008
- Reducing greenhouse gas emissions in its existing stores, clubs and distribution centers by 20 percent by 2012
- Building a viable store prototype that is 25 to 30 percent more efficient and emits up to 30 percent fewer greenhouse gases by 2009

### *Executive Responsibility*

Wal-Mart has developed 13 Sustainable Value Networks (SVNs) to "integrate sustainable practices into every aspect of its business." Each SVN is responsible for developing initiatives that drive sustainability into a specific business division and also align with one of the overarching company sustainability goals. Salaried associates at all levels in the company are involved in the SVNs, including executive leadership, top management, division leaders and other associates at various levels throughout the company. Network activities are monitored and managed at a number of levels and are reported directly to the CEO. In addition to associates, the SVNs "bring together leaders inside of Wal-Mart along with leaders from supplier companies, environmental groups, academia and government" to focus on a diverse array of sustainability issues at the company. A few examples of the SVNs include a Greenhouse Gas Network, a Sustainable Buildings Network, a Logistics & Fleet Network and an Alternate Fuels Network. Seven other SVNs focus on specific company products, and three SVNs address sustainability issues related to the company's supply chain.

The SVNs provide regular progress and activity reports to Wal-Mart executives. Additionally, quarterly "Sustainability Milestone Meetings", attended by Wal-Mart executives, highlight progress and updates. Tom Hyde, executive vice president of legal compliance and ethics and corporate secretary, is the executive sponsor of the GHG Network. Jim Stanway is the captain of Wal-Mart's Greenhouse Gas Sustainability Value Network. Eric Zorn, Johnnie Dobbs and Greg Johnston are respectively the executive sponsors of the Sustainable Buildings, Logistics & Fleet, and Alternative Fuels Networks

### *External Initiatives*

In 2007, Wal-Mart partnered with the U.S. Conference of Mayors to launch the Mayors' Climate Protection Awards Program. The awards recognize mayors who have implemented outstanding, innovative programs to improve environmental conditions, reduce greenhouse gas emissions and promote healthy living habits in the communities they serve. Wal-Mart has

## WAL-MART STORES, INC.

also partnered with the World Resources Institute's "Green Supply Chain Project" which helps large companies promote corporate supply chain initiatives that are based on sustainability criteria and lead to improved sustainability performance and financial value for both buyers and suppliers. The project aims to promote sustainability through a collaborative research, learning and communication effort by WRI and a group of corporate partners. Additionally, Wal-Mart sits on the steering committee of the GHG Protocol Initiative managed by the World Resources Institute and the World Business Council on Sustainable Development. The Initiative is working to develop guidelines for product and supply chain greenhouse gas accounting and reporting. Wal-Mart has also partnered with the Clinton Climate Initiative to collaborate in designing new products and best practices related to energy technologies and exploring ways to use their purchasing resources to lower prices on sustainable technologies. As noted below, Wal-Mart has partnered with the Carbon Disclosure Project to launch a pilot project with CDP to use the CDP survey methodology to engage its suppliers to disclose on climate change-related issues

*Employee Training* Wal-Mart encourages employees to achieve personal sustainability goals through its Personal Sustainability Project. The project is voluntary and was adopted in 2006. According to Wal-Mart, "the program is focused on helping Associates integrate sustainability into their own lives by making small changes to everyday habits."

*Executive Compensation* Wal-Mart does not link executive officers' compensation to attainment of environmental and/or climate-related goals.

### Public Disclosure

Score: 7

*Annual Report* No climate change mention.

*Securities Filings* No climate change mention.

*Other Disclosure* In addition to providing climate change-related information on its website and in its annual sustainability reports, Wal-Mart also publishes a quarterly sustainability newsletter.

*Sustainability Reports* **USA:** *Sustainability Progress to Date 2007-2008*, November 2007  
**Canada:** *2007 Corporate Social Responsibility Report - Environment*  
**Japan (Seiyu):** *2007 Seiyu Sustainability Report*  
**Mexico :** *2007 Social Responsibility Report (see page 14 for Environmental Sustainability)*  
**URL:** <http://walmartstores.com/Sustainability/7951.aspx> (US)  
**GRI Accordance:** Some of Wal-Mart's sustainability reports utilize GRI reporting formats.

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* While Wal-Mart says that it does "not foresee significant regulation of [its operations," the company does "expect regulation that would impact [its] energy suppliers and, therefore, increase [its] energy costs." The company also says that it sees climate change "as a significant threat" to the communities it serves globally.

In addition to identifying potential regulatory and physical risks, Wal-Mart acknowledges a "general risk of resource availability constraints, caused by climate change" which could affect the company's supply chain.

# WAL-MART STORES, INC.

## Public Policy

Wal-Mart executives have testified before the U.S. Senate on two occasions, in April 2006 and May 2007, to advocate for a well-designed cap-and-trade system in the US. In 2008, in a document released to members of Congress and NGOs, Wal-Mart stated:

“Wal-Mart believes that a well-designed cap-and-trade system will foster the competition, innovation, and business-to-business and business-to-consumer transactions that will result in low-cost emission reductions and the creation of new ‘green’ jobs through increased demand for new clean energy and energy saving technologies and services. Legislation and resulting regulations must be designed to take advantage of the power and the efficiency of the marketplace. A well-designed system would incentivize all sectors and levels of the economy to seek cost-effective emissions reductions.”

Wal-Mart has also endorsed the principles of the U.S. Climate Action Partnership. In January 2007, Linda Dillman, then Wal-Mart’s Vice President of Risk Management, Benefits and Sustainability, released the following statement: “We support US-CAP’s leadership on this important issue. We look forward to working with US-CAP, Congress and the White House to enact meaningful legislation to slow, stop and reverse the growth of greenhouse gas emissions.”

In addition, Wal-Mart says that a properly designed system would involve consumers as part of the solution. In June 2008, Wal-Mart issued a letter to Senators Barbara Boxer and James Inhofe in support of the Boxer-Lieberman-Warner Substitute to the Lieberman-Warner Climate Security Act. In the letter Wal-Mart’s Senior Vice President Ray Bracy wrote:

“I am writing to commend you both on your leadership on the critical issue of climate change. . . We applaud you and the bipartisan Senate leadership for bringing the Boxer-Lieberman-Warner Substitute to the Lieberman-Warner Climate Security Act, S. 2191, to the floor of the United States Senate. . . Wal-Mart believes that a properly designed system must involve consumers as part of the solution. Just as utilities might be able to generate emissions reduction credits through programs aimed at increasing the use of energy efficient appliances and through other promotional efforts meant to change consumer behavior, other sectors should be similarly encouraged to maximize the ability of consumers to reduce their carbon footprints. Retailers often have the greatest impact on consumer choice through promotion, display and, of course, pricing.”

## Emissions Accounting

Score: 11

GHG Emissions Inventory

Year: 2007

Facility/Region: Global

Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	5,161,340
Scope 2 (Indirect –Electricity)	15,079,475
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

# WAL-MART STORES, INC.

<i>Accounting Methods</i>	Wal-Mart says that its GHG inventory “was designed to meet the most rigorous and complete accounting and reporting standards, positioning Wal-Mart to participate in voluntary reporting initiatives and other registries.” The company also notes that during the course of 2007 it developed improved data capture and management systems, enabling the company to more accurately re-baseline 2005 and 2006 GHG emissions.
<i>External Verification</i>	Wal-Mart’s GHG emissions inventory has been externally verified by Environmental Resources Trust.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score: 35

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Absolute)</b>	<b>20%</b>	<b>2005</b>	<b>2012</b>	<b>Globally, existing Wal-Mart and Sam’s Club stores, and all distribution centers</b>
<b>Energy Efficiency</b>	<b>25%</b>	<b>2005</b>	<b>2008</b>	<b>Truck Fleet</b>
<b>Energy Efficiency</b>	<b>100%</b>	<b>2005</b>	<b>2015</b>	<b>Truck Fleet</b>

*Target Details* In addition to its absolute emissions and energy reduction goals for its stores, distribution centers, and truck fleet, Wal-Mart has also committed to design and open a store prototype that is up to 25 to 30 percent more energy efficient and emits up to 30 percent fewer greenhouse gases by 2009.

*Target Achievement* Wal-Mart has achieved reductions greater than 110,000 metric tons of CO<sub>2</sub>.

*Energy Efficiency* As noted above, Wal-Mart has established three energy efficiency goals for its stores and vehicle fleet: a) making its fleet 100 percent more efficient when compared to the 2005 baseline fleet efficiency by 2015; b) increasing truck fleet efficiency by 25 percent by 2008; and c) building a viable store prototype that is 25-30 percent more efficient by 2009.

The company is retrofitting existing stores to achieve its target of a 20 percent reduction in GHG emissions by 2012. Wal-Mart says it has identified efficiency improvements in its lighting, HVAC and refrigeration units that are expected deliver significant reductions in energy use. Additionally, Wal-Mart employs a centralized Energy Management System (EMS) to monitor and control the heating, air conditioning, refrigeration and lighting systems for all U.S. stores and Sam’s Clubs from Wal-Mart’s corporate headquarters in Bentonville, Arkansas. The EMS enables Wal-Mart to constantly monitor and control energy usage, analyze refrigeration temperatures, observe HVAC and lighting performance, and adjust system levels from a central location 24 hours per day, seven days a week.

Since 2007, Wal-Mart has opened a number of “High Efficiency” prototype stores. The first set of prototypes, called HE.1s, use 20 percent less energy than the company’s typical Supercenters. In January 2008, Wal-Mart opened the next generation “High Efficiency” prototypes (HE.2s). These stores are estimated to be 25 percent more efficient. In March 2008,



## WAL-MART STORES, INC.

Wal-Mart opened its HE.5 prototype in Las Vegas. The HE.5 prototype features improvements in heating, cooling, refrigeration and lighting systems that are up to 45 percent more efficient than Wal-Mart's baseline Supercenters. As noted above, Wal-Mart has set a goal to design and open a viable prototype by 2009 that is up to 25-30 percent more energy efficient than its 2005 baseline.

### *Renewable Energy*

Wal-Mart has set a target to reach 100 percent renewable energy use. In addition, Wal-Mart has launched an initiative to install solar panels on the roofs of 22 stores in Hawaii and California. The company estimates the project will reduce the company's greenhouse gas emissions by 6,500 to 10,000 metric tons per year.

In an effort to achieve its renewable energy goal, Wal-Mart has partnered with the Cleantech Group to initiate the Cleantech Innovation Project. In 2008, the project began accepting submissions through a web portal for new technologies that would help the company to realize its renewable energy and waste elimination goals.

Wal-Mart has also set goals to increase its use of alternative fuels. The company has established an Alternative Fuels Network to "address the challenge of pushing for innovation and alternative sources of energy." The Alternate Fuels Network is working to blend and sell more E-10 gasoline to reduce emissions, testing hydrogen fuel cell forklifts in a distribution center, and exploring the creation and use of other alternative fuels.

### *Emissions Trading*

ASDA, Wal-Mart's U.K. subsidiary, participated in the pilot U.K. Emissions Trading Scheme in 2007.

### *Products & Services*

Wal-Mart says that it is "seeking low-carbon, affordable products and investing in identifying and marketing them." The company has set a number of goals to increase its offering of energy-efficient products:

- In 2006, the company set a goal to sell 100 million compact fluorescent light bulbs (CFLs), achieving the goal three months ahead of schedule. As of June 2008, Wal-Mart had already sold 192 million CFLs.
- In 2008, Wal-Mart set a goal to make the most energy intensive products sold in all of its stores around the world 25 percent more efficient in three years.
- CEO Lee Scott announced the company's goal to sell only Energy Star certified air conditioners in the U.S. and to increase the efficiency of all flat-screen TVs by 30 percent by 2010. Mr. Scott stated, "We do not want our customers to have to choose between products they can afford and energy-efficient products."
- Wal-Mart has set a target to double its sales of products that help make homes more energy efficient. Acknowledging the company's potential to address climate change through its products, Wal-Mart notes, "We can play a unique role in aggregating compensation for carbon reduction and passing the value of that compensation onto our customers by making energy-efficient technologies more affordable."
- Wal-Mart has set a goal to blend 75 million gallons of ethanol into the fuels it sells and uses by 2010. In order to complete this goal, they have expanded the number of markets where they sell E10. By the end of fiscal year 2008, Wal-Mart expects to have blended approximately 37 million gallons of ethanol into the fuel they have used or sold.

## WAL-MART STORES, INC.

### *Research & Development*

Wal-Mart has instituted a three-phase process for testing new technologies that show promise of providing energy savings or reducing greenhouse gas emissions in its facilities. The process includes testing technologies at one of Wal-Mart's experimental stores, then piloting the technology in a larger test group of stores, and finally integrating the successful technology into the basic store prototype.

Additionally, Wal-Mart is working with the Cleantech Group to gather ideas from innovators around the world and test the technologies in real-world conditions.

### *Supply Chain Management*

On January 23, 2008, Wal-Mart's President and CEO, Lee Scott, announced Wal-Mart's commitment to build the "Supply Chain of the Future" by incorporating environmental, social and quality criteria into the company's product procurement system. This announcement followed the company's September 2007 launch of a partnership with the Carbon Disclosure Project to measure the energy used to create certain company products and to encourage suppliers to reduce GHG emissions. The company launched a pilot project with CDP to use the CDP survey methodology to engage its suppliers to disclose on climate change-related issues. The company also says that it intends to develop "supplier scorecards" to evaluate the carbon footprint of its suppliers and products.

Furthermore, Wal-Mart recently launched the China Initiative, a flagship program to drive innovation and sustainable business practices throughout its facilities and stores located in China, as well as its suppliers' factories. Wal-Mart has identified specific work streams on which to focus its efforts and is developing metrics by which to measure progress. In October 2008 Wal-Mart convened 900 leading suppliers, Chinese officials and other key stakeholders for "Sustainability Summit – Beijing 2008" where the company will officially launch the China Initiative.

Wal-Mart is also working with its suppliers to reduce packaging and encourage use of renewable or recyclable materials. On February 1, 2008, Wal-Mart began using an online packaging scorecard to evaluate 60,000 suppliers on their ability to develop more sustainable packaging. The scorecard is a tool that all Wal-Mart buyers use to make more informed purchasing decisions and may show preference to suppliers who demonstrate a commitment to sustainable packaging.

Wal-Mart has implemented a Supplier Energy Efficiency Program (SEEP) through which Wal-Mart facilitates energy efficiency audits and retrofits of participating suppliers' buildings. The program enables Wal-Mart's suppliers to learn from Wal-Mart's own experience with energy efficiency in Wal-Mart buildings and stores. The company says that it intends for this program to form the basis of an energy efficiency model that can be adopted by any private or public sector organization that manages a supply chain. Wal-Mart has also publicly stated that it will give preference to suppliers with strong and improving environmental performance.

.Since 2005, Wal-Mart has also made progress in reducing the GHG emissions associated with its distribution and logistics. The company is progressing toward its goal to improve fleet efficiency by 25 percent by 2008 across its fleet of approximately 7000 trucks. This year, Wal-Mart was able to reach its goal by loading trucks more efficiently, working with suppliers to reduce packaging, adding fuel-saving technologies to the trucks and creating better driving routes that cut out miles. As the company continues to move toward its goal to double fleet efficiency, Wal-Mart will look into adopting hybrid technologies for its fleet.

Carrefour has identified climate change as a “key issue” for its business, recognizing the importance of moving beyond its own operations to address the greenhouse gas (GHG) emissions associated with its supply chain and products. Carrefour has conducted life cycle analyses (LCAs) to assess the climate change impact of the production and use of its products. The company has also set a global energy efficiency target.

**Summary Score: 52**

## Company Information

Headquartered in Paris, Carrefour SA is the world’s second-largest retailer and the largest in Europe. The company operates four main grocery store formats: hypermarkets, supermarkets, hard discount and convenience stores. Carrefour has more than 15,000 stores in 30 countries and employed 490,042 as of December 31, 2007.

### Contact Information

**Chairman:** Amaury De Seze  
**CEO:** José Luis Durán [Duran will be replaced by Lars Olofsson on Jan.1, 2009.]  
**Website:** www.carrefour.com  
**Address:** 26 Quai Michelet, Levallois-Perret, 92695 France

## Board Oversight

**Score: 0**

### Board Committee/Member

None identified.

### Board Role

Prior to the company’s decision in July 2008 to adopt a single board of directors in place of its dual board structure, Carrefour’s Management Board had overall responsibility for climate change. The Management Board supported the company’s energy efficiency target and requested regular presentations from executives on the company’s progress in achieving its goals. In 2007 Carrefour’s Sustainable Development team presented at the two board meetings on the company’s energy strategy and performance. Carrefour’s Management board has been replaced by an Executive Committee, which will continue to receive updates on the company’s key sustainability issues.

### Board Training

None identified.

## Management Execution

**Score: 12**

### CEO Leadership

CEO José Luis Duran receives regular updates on sustainability issues through his role on the Executive Committee. According to the company, Mr. Duran “strongly supports” Carrefour’s sustainability commitments.

### Company Strategy

Carrefour has identified climate change as one of five “key issues” for 2007. As one of the world’s largest retail chains, the Carrefour Group “recognizes its role in contributing to society’s actions to limit greenhouse gas emissions and to anticipate climate change.” The company says that it “plays an active role in this process by reducing its own emissions and encouraging its customers, employees, suppliers and service providers to reduce theirs.” As part of its general environmental initiatives, Carrefour “has been increasing initiatives to reduce the environmental impact of its stores, warehouses and merchandise shipping – putting particular emphasis on greenhouse gas emissions.” In addition, beyond focusing

# CARREFOUR GROUP SA

on reducing its operational direct and indirect emissions, Carrefour recognizes that these initiatives often “represent financial savings as well,” and the company is offering products that “enable customers to develop a more sustainable consumption.” The company has established a number of commitments to reduce its climate change impact, including reducing the greenhouse gas (GHG) emissions associated with its store operations, products, and logistics. The company tracks its progress in achieving these goals in its sustainability report.

<i>Executive Responsibility</i>	Carrefour’s Sustainability Department is overseen by the company’s Corporate Affairs Director, Eric Bascle, who reports directly to CEO José Luis Duran. The Sustainability Department works in close cooperation with the Assets, Logistics, and Quality and Purchase Departments on climate change issues.
<i>External Initiatives</i>	As part of the European Sustainable Energy Campaign, Carrefour has partnered with the European Commission and the World Wildlife Fund on a campaign to raise consumer awareness and increase the sale of compact fluorescent light bulbs. In China, Carrefour cooperated with the WWF to launch an in-store campaign focused on energy conservation. The company is also a CDP Supply Chain Leadership Collaboration member.
<i>Employee Training</i>	Carrefour has implemented several awareness campaigns among its employees in different countries to address issues such as climate change and energy conservation.
<i>Executive Compensation</i>	According to the company, “energy savings objectives and the delivery of energy efficiency actions are assessed as part of personnel performance review for those people concerned.”

## Public Disclosure

Score: 10

<i>Annual Report</i>	Carrefour’s 2007 Annual Report discusses the company’s energy savings commitments including its target to reduce energy consumption by 20 percent by 2020 compared to 2004 levels.
<i>Securities Filings</i>	Carrefour does not file a Form 10-K or 20-F with the US Securities and Exchange Commission.
<i>Other Disclosure</i>	Carrefour discusses its climate change initiatives on its website and in its sustainability report. The company also publishes a separate booklet to discuss five issues the company views as key group challenges, including climate change.

**Sustainability report:** *Carrefour Group: Building Responsible Relationships.*

Sustainability Report 2007, May 2008

**URL:** <http://www.carrefour.com/cdc/responsible-commerce/sustainability-report/>

**GRI Accordance:** G3 Draft

<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	While Carrefour acknowledges that the European Commission’s GHG emission reduction targets “will encourage further regulation in the field of energy production and consumption,” the company says that its “proactive and anticipatory approach is enabling the Group to make these regulatory risks more an opportunity for cost reduction, commercial growth and customer and staff loyalty.”

# CARREFOUR GROUP SA

Carrefour also notes that climate change-related physical risks “may impact the company’s activity in a number of ways.” Extreme weather events and / or changes in weather patterns may affect the company’s in-store operations or its supply of products. In particular, Carrefour notes that agricultural products may be at risk, as “the availability and price of agricultural products are naturally affected by climatic conditions which determine the quality and quantity of the supply of these fresh food products.” In addition, the company notes that customer demand for products may change rapidly in response to unusual weather events or changes in weather patterns.

Carrefour has completed detailed risk mapping for each country where it operates. This risk mapping includes natural disasters and environmental risks, including risks from climate change-related events (flooding, extreme weather events, etc).

## Public Policy

Carrefour says that it “maintains regular dialogue with public authorities and policy makers on issues related to climate change.” Carrefour participated in the French government’s “Grenelle for the Environment,” a multi-stakeholder dialogue to develop voluntary programs and new legislation on climate change and other environmental issues. Carrefour is also involved in public debates on carbon labelling for products.

## Emissions Accounting

Score: 14

GHG Emissions Inventory

Year: 2007

Facility/Region: Global Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)	
Scope 1 (Direct)	1,777,727*	* Data based on 72% of 2007 consolidated sales; scaled up to 100%
Scope 2 (Indirect –Electricity)	2,347,882	** Headquarters only; approx. 1200 employees
Scope 3	—	*** Emissions related to transport of goods between warehouses and stores; estimate scaled up to 100% of sales
Travel	14,468**	**** Emissions generated during the product life-cycle; includes only emissions from paper used in commercial publications and free disposable plastic checkout bags.
Logistics	561,892***	
Products	585,741****	
Supply Chain	—	

Certified CO<sub>2</sub> Offsets

None identified.

## Strategic Planning

Score: 16

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
Energy Efficiency	20% (kWh/m <sup>2</sup> )	2004	2015	Global

Target Details

In addition to the company’s global energy efficiency target, Carrefour China committed to reducing energy consumption by 20 percent by the end of 2008.

# CARREFOUR GROUP SA

*Target Achievement* In 2007 the Group recorded a 5 percent reduction in energy consumption and associated GHG emissions compared to 2006. Since 2004, the group has reduced electricity consumption by 9.2 percent (kWh/m<sup>2</sup>).

*Energy Efficiency* Through its in-store energy efficiency programs, Carrefour reduced the energy consumption of its hypermarkets in France by 20 percent between 2004 and 2007. Similar efforts in Italy have resulted in a 26 percent reduction in energy use in hypermarkets and a 10 percent reduction in supermarkets over the same period.

*Renewable Energy* Carrefour says that it “reviewed the opportunity to produce its own renewable energy on-site at stores with solar energy,” and concluded that “current technology is not sufficiently mature...to produce the necessary quantities of electricity for store use.” When asked to discuss the company’s position on purchasing renewable energy certificates, Jean-Francois Brunet, Group Assets Manager, states in the company’s sustainability report: “We prefer to direct our resources toward efficient investment in the short-term and reducing our consumption rather than toward this solution, which is simple to implement but less efficient for the environment. Better environmental efficiency comes from the energy we don’t use.”

*Emissions Trading* None identified.

*Products & Services* Carrefour says that it “studies opportunities to develop its range of products which provide solutions for consumers to help them reduce their emissions.” The company has conducted several product life cycle analyses to assess the greenhouse gas emissions associated with the production and use of the company’s products. According to the company, the objective is to “increase understanding of embedded greenhouse gas emissions and...identify hotspots (key impacts at specific stages in the product life cycle) in order to drive improvement in the supply chain and to provide appropriate advice to consumers on the more sustainable use of the products.” Carrefour’s preliminary LCAs, conducted between 2003 and 2006, assessed the impacts of the company’s check-out bags, catalogues, and packaging. Conclusions from these analyses prompted the company to reduce the number of free throwaway plastic bags and the quantity of paper used for commercial publications. The company estimates that it saved 8,045 tons of CO<sub>2</sub> in 2007 by reducing use of disposable bags. Carrefour is now conducting LCAs for some of its own brand products, and is expanding its product lines to include more energy-saving household products.

Carrefour has also partnered with the French government to promote the use of Natural Gas Vehicles (NGVs). In November 2007 the company opened the first French NGV pump for use by individual customers at a hypermarket. In addition, Carrefour opened 42 E85 pumps in 2007, making it the largest retailer of ethanol fuel in France.

*Research & Development* Carrefour works with its suppliers to develop and test new energy saving products and in-store technologies.

*Supply Chain Management* According to Jean-Francois Callaud, Group Supply Chain Director, “Carrefour works on a daily basis to reduce the number of kilometres travelled to deliver goods to stores based on more efficient filling procedures and a more efficient use of trucks.” Carrefour’s “number one goal” is to reduce truck mileage by optimizing truck loading, rationalizing transport flows and using alternative means of transport, particularly waterways and rail. The company says that



it works closely with its suppliers to “reduce the number of empty kilometres” by promoting pooling among suppliers for warehouse deliveries and using consolidation warehouses where goods are delivered by suppliers and then re-distributed by Carrefour in fully-loaded trucks. The company has set a goal to transport 40 percent of its import flows in France by waterway or rail.

In January 2008 Carrefour joined the CDP Supply Chain Leadership Collaboration to engage with its suppliers on climate change issues. The company says that it hopes “suppliers will seize this opportunity to analyse their activities in terms of their direct and indirect greenhouse gas emissions with a view to driving improvements.”

“Energy and Climate” is one of the “four major cornerstones” of Staples’ environmental strategy, and the company has outlined a four-pronged approach to addressing its energy consumption. Staples has set an absolute greenhouse gas (GHG) emissions reduction target, which it achieved three years early. Due to organic growth and acquisitions, however, the company has retained its original target and will continue to reduce its emissions to achieve the target again for 2010. Staples also purchases 20 percent of its US electricity from renewable sources and is installing 14 rooftop photovoltaic energy systems.

**Summary Score: 43**

## Company Information

Staples is an office products company offering a large, diversified selection of office supplies and services, business machines and related products, computers and related products, and office furniture. The company operates in three business segments: North American Retail, North American Delivery, and International operations. As of March 2008 (prior to the company’s acquisition of Corporate Express in July) Staples’ North American Retail segment consisted of 1,738 stores in 47 US states and 10 Canadian provinces at the end of fiscal 2007. The company’s International Operations consists of retail stores, catalog and Internet businesses operating under various names in 27 countries in Europe, Asia, Australia and South America. As of February 2, 2008, Staples employed 43,048 full-time and 32,540 part-time associates.

### Contact Information

**Chairman/CEO:** Ronald L. Sargent

**Website:** www.staples.com

**Address:** 500 Staples Drive Framingham, MA 01702 United States

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 8**

*CEO Leadership* None identified.

*Company Strategy* Staples’ environmental policy focuses on “four major cornerstones” the company believes to be critical to reaching its overarching environmental goals. The company identifies “Energy and climate” as one of these four themes, stating: “Staples is committed to reducing the effects of our energy use on climate through continued conservation, the adoption of renewable energy technologies where financially viable, and the purchase of renewable energy certificates to promote the development of clean renewable energy.” The company says that energy efficiency is fully integrated into the company’s culture, called the Staples Soul.

Staples’ energy strategy is divided into four parts: a) energy conservation; b) renewable energy; c) GHG reduction commitment; and d) products and services.

# STAPLES, INC.

<i>Executive Responsibility</i>	Bob Valair is the Director of Energy and Environmental Management. Staples' energy team conducts bi-annual strategic energy-planning meetings to assess the company's energy strategies and set goals. Internal team members include energy staff associates as well as representatives from operations, marketing, corporate and other departments. External team members include energy consultants and key suppliers.
<i>External Initiatives</i>	The company has joined the following external initiatives: WRI Green Power Market Development Group; WRI Climate Northeast Partnership; USEPA Climate Leaders Program.
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	None identified.

## Public Disclosure

Score: 6

<i>Annual Report</i>	Staples includes a summary of its 2007 Staples Soul report in the company's annual report. The summary describes the company's energy efficiency initiatives and renewable energy purchases.
<i>Securities Filings</i>	Staples states in its Form 10K: "We are committed to offering a broad selection of environmentally preferable products, providing easy recycling solutions for customers and associates, investing in renewable energy and energy conservation, and supporting environmental education efforts. These initiatives help preserve natural resources for future generations, while helping meet customer needs, create operational efficiencies, and spark new business opportunities."
<i>Other Disclosure</i>	Staples provides information on its investments in energy efficiency and renewable energy in its 2007 sustainability report. The company also provides an overview of its climate initiatives through the Energy and Climate section of its website.  <b>Sustainability Report:</b> 2007 Staples Soul Report <b>URL:</b> <a href="http://www.staples.com/sbd/content/about/soul/energyclimate.html">http://www.staples.com/sbd/content/about/soul/energyclimate.html</a> <b>GRI Accordance:</b> None identified.
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Not public)
<i>Public Policy</i>	None identified.

## Emissions Accounting

Score: 11

*GHG Emissions Inventory*    **Year:** 2007    **Facility/Region:** U.S. only    **Protocol:** GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
<b>Scope 1 (Direct)</b>	<b>61,305</b>
<b>Scope 2 (Indirect –Electricity)</b>	<b>346,195*</b>
<b>Scope 3</b>	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

\* Scope 2 emissions include the 114,000 mtCO<sub>2</sub>e in Scope 2 emissions offset via Green-e certified RECs and green power purchases. Removing these emissions, the company's Scope 2 emissions would be 232,195 mtCO<sub>2</sub>e.

# STAPLES, INC.

<i>Accounting Methods</i>	Staples reports on all of its operating facilities in the United States for which energy information is available, whether fully owned, partially owned, or leased. For those leased sites in which energy costs are included in lease payments and therefore no data on facility energy use is available, Staples estimates its associated energy use and emissions.
<i>External Verification</i>	Staples' emissions inventory is reviewed by the EPA as part of the Climate Leaders Program. Staples currently estimates the GHG emissions for all other countries outside of the U.S. based on limited information, so international data does not adhere to any methodology and is not externally verified.
<i>Certified CO<sub>2</sub> Offsets</i>	In 2007 Staples offset 114,400 metric tons of CO <sub>2</sub> e through purchase of Green-e certified renewable energy certificates (RECs).

## Strategic Planning

Score: 18

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Absolute)</b>	<b>7%</b>	<b>2001</b>	<b>2010</b>	<b>United States</b>

<i>Target Details</i>	Due to its recent acquisition of Corporate Express, Staples has indicated that the company will adjust its target baseline in 2009. In Europe, all Staples business units have set a goal to reduce energy costs by 5 percent in 2008, regardless of growth.
<i>Target Achievement</i>	As of 2007, the company had reduced its GHG emissions by 13 percent below 2001 levels. However, due to organic growth and recent acquisitions, Staples' emissions have since increased and further emissions reductions will be required for the company to achieve its goal for 2010.
<i>Energy Efficiency</i>	<p>As the company states in its 2007 sustainability report, "Maximizing energy efficiency continues to be a priority for Staples." The company invested \$3 million in 2007 to improve the efficiency of conveyers, HVAC systems, and lighting. In 2007 Staples opened an energy efficient store in Miami, Florida that is registered under the LEED Green Building Rating System and is currently applying for certification to the Silver level. The company has four more stores under construction and intends to apply for LEED certification for these stores as well.</p> <p>Staples has reduced its electricity use by 15 percent since 2001 by implementing a number of energy efficiency measures in its stores and distribution centers. In 2007 Staples held a contest among its US distribution facilities to identify and implement energy efficiency improvements, resulting in a reduction of 5 million kilowatt hours of electricity use.</p>
<i>Renewable Energy</i>	Staples says that its initiatives to "encourage the expansion of renewable energy through the purchase of renewable energy certificates and the installation of on-site renewable energy technologies ... have clear environmental benefits, reduce overall energy costs, and diversify [the company's] energy sources to mitigate the impacts of increases in fuel prices." Staples purchased more than 124 million kilowatt-hours of renewable energy certificates in 2007, comprising about 20 percent of Staples' total U.S. electricity demand.

## STAPLES, INC.

Staples is also working with SunEdison to install 14 rooftop photovoltaic energy systems, which are expected to generate enough electricity to power 400 homes each year. The company completed eight installations in 2007, reaching a total of 13 active rooftop solar systems. Staples has set a goal to complete or start construction on 12 rooftop solar installations in 2008. In early 2008, Staples was ranked 4th out of the top 10 corporate retail purchasers of "green power" by U.S. EPA's Green Power Partnership.

*Emissions Trading* None identified.

*Products & Services* Staples believes that "climate change presents certain opportunities" to the company, particularly because "supplying products, like recycled content paper and Energy Star office technology products, that have a lower lifecycle carbon footprint reduces susceptibility to increases in fossil fuel prices and carbon regulations." Staples is an ENERGY STAR retail partner and is working to highlight and market ENERGY STAR office technology.

*Research & Development* None identified.

*Supply Chain Management* In 2007 Staples joined the EPA's SmartWay Transport Partnership, a collaboration between the EPA and the freight industry to reduce greenhouse gas emissions associated with shipping. Staples reported saving 540,000 gallons of diesel fuel and nearly \$1.5 million in fuel costs through fleet fuel efficiency improvements in 2007.

Target is focused on energy efficiency as the central facet to its climate change strategy. The company has implemented a number of energy-saving technologies in its stores and has also invested in photovoltaic panels for several of its California stores. Target has developed a greenhouse gas (GHG) emissions inventory, but has not yet publicly disclosed an emissions reduction target.

**Summary Score: 37**

## Company Information

Operating 1648 stores in 47 states, Target is the second largest chain retail in the United States. The company operates large-format general merchandise and food discount stores, which include Target and SuperTarget stores, as well as a fully integrated online business, Target.com. Target also offers credit card and debit card products (REDcards) and owns apparel supplier The Associated Merchandising Corp. At February 2, 2008, Target employed approximately 366,000 full-time, part-time and seasonal employees.

### Contact Information

**CEO:** Gregg W. Steinhafel, President, CEO, and Director  
**Chairman:** Robert J. Ulrich

**Website:** www.target.com

**Address:** 1000 Nicollet Mall Minneapolis, MN 55403 United States

## Board Oversight

**Score: 3**

*Board Committee/Member* Corporate Responsibility Committee

*Board Role* According to its charter, the Corporate Responsibility Committee has the responsibility to “oversee the Corporation’s programs in response to previously identified public issues.” However, Target does not indicate if this committee reviews climate change issues specifically.

*Board Training* None identified.

## Management Execution

**Score: 8**

*CEO Leadership* None identified.

*Company Strategy* In the “Environmental” section of its website, Target states: “As a responsible corporate citizen, Target recognizes the importance of understanding our carbon footprint. With growing scientific evidence of the threat of global warming, Target is working aggressively to identify ways to minimize our carbon footprint.” Such steps to reduce its carbon footprint include developing an emissions inventory, reporting through the Carbon Disclosure Project, and improving the energy efficiency of its buildings. In its response to the Carbon Disclosure Project, Target says that it “recognizes the need to reduce its carbon footprint regardless of regulation and is focused on energy efficiency as a means to reduce GHG emissions.” Minimizing the company’s carbon footprint is one of six goals outlined in the company’s “environmental philosophy.”

*Executive Responsibility* Target’s Sustainability team is responsible for implementing climate change initiatives within the company. The team includes executives from the company’s Product Design



and Development and Property Development departments. According to Target, the Sustainability team is “responsible for the development of the company’s sustainability policy and strategy and is currently coordinating efforts and priorities across the company.” The team is comprised of several sub-committees, each including experts from across the company to work on specific sustainability issues such as the company’s carbon footprint, sustainable facilities, product lifecycle, and transportation. These sub-committees are managed by a Sustainability Manager. The teams report their progress on a quarterly basis to the full Sustainability team, which in turn provides updates to senior leadership several times throughout year.

<i>External Initiatives</i>	Target has joined the following initiatives: USEPA Climate Leaders; USEPA ENERGY STAR; US Green Building Council Portfolio Program.
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	None identified.

## Public Disclosure

**Score: 7**

<i>Annual Report</i>	In its 2007 Annual Report, Target briefly highlights its efforts to purchase renewable energy as an example of the company’s commitment to sustainability. Target also notes its participation in the U.S. Green Building Council’s Portfolio Program pilot.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	Target discusses its climate change initiatives on the company website and in its 2007 corporate responsibility report.  <b>Sustainability Report:</b> <i>Target Corporate Responsibility Report 2007</i> , June 2007 <b>URL:</b> <a href="http://sites.target.com/images/corporate/about/responsibility_report/responsibility_report_full.pdf">http://sites.target.com/images/corporate/about/responsibility_report/responsibility_report_full.pdf</a> <b>GRI Accordance:</b> 2002 CI
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	In its CDP6 response, Target identifies regulatory, physical, and consumer risks associated with climate change that could impact the company. The company states that while it is “not regulated by current legislation, the company continues to monitor policy proposals.” Target says that although future regulation will most likely focus on direct emitters of GHG emissions, the company is “likely to experience some level of impact,” and its “strategy of driving energy efficiency through equipment selection, operational practice and exploration of innovative technologies will help to...position [the company] to respond to potential regulatory risks associated with climate change legislation.” The company also states that it believes “the economic impact due to climate change legislation will most likely effect [sic] energy rates as well as the potential value of renewable energy credits.”  Regarding physical risks associated with climate change, the company notes that “understanding the financial impacts associated with physical risks is critical to [its] success as a retailer.” The company describes its response to a number of natural disasters in its areas of operation, including wildfires in California, storms in Texas and Virginia, as well as a tornado in Virginia.

Recognizing that “climate change and the topic of sustainability are likely to shift purchasing habits as more and more consumers are looking for opportunities to reduce their individual and family’s impact on the environment,” Target says that it sees opportunities to meet growing demand for “environmentally-friendly products.”

*Public Policy*

In its CDP6 response, the company states: “Target supports a voluntary approach to the climate change issue, including policies such as clean energy tax incentives. These incentives help reduce global warming pollution through increased use of renewable energy sources; promote consumer use of energy-efficient products; help create new, high-wage jobs; and reduce energy costs for consumers and businesses.” Targets says it “works proactively with lawmakers, both directly and through retail industry associations, to develop policy solutions that bring about good environmental stewardship, make business sense, and contribute to the health of our communities.”

## Emissions Accounting

**Score: 11**

*GHG Emissions Inventory*

**Year:** 2007

**Facility/Region:** Global

**Protocol:** GHG Protocol

<b>Emissions</b>	<b>CO<sub>2</sub>e (Metric Tonnes)</b>
<b>Scope 1 (Direct)</b>	<b>248,113</b>
<b>Scope 2 (Indirect –Electricity)</b>	<b>2,709,887</b>
<b>Scope 3</b>	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

*Accounting Methods*

The methodology and calculation procedures used by Target are in accordance with U.S. EPA Climate Leaders guidelines, which are based on GHG Protocol guidelines.

*External Verification*

Target’s emissions inventory is reviewed for accuracy by United States Environmental Protection Agency’s (USEPA) technical assistance contractor as part of Target’s participation in the Climate Leaders program.

*Certified CO<sub>2</sub> Offsets*

None identified.

## Strategic Planning

**Score: 8**

*Emissions Reduction Targets*

Target says that it is “currently working with USEPA Climate Leaders Program to set an emissions reduction goal.”

*Energy Efficiency*

According to the company, energy efficiency is a central component to Target’s climate change strategy. In its 2007 sustainability report, Target states: “We recognize that climate change could adversely impact us by producing higher energy costs, increased operational

expenses (to track and manage climate-change issues) and incremental capital investment (for carbon dioxide reduction projects.) As a result, Target puts tremendous focus on best practices for energy efficient building design and operations.” The company says that it focuses primarily on the systems that consume the greatest portion of its energy needs, including lighting and heating, ventilation and air conditioning (HVAC) equipment. Target says that it uses an integrated energy management system controlled at its headquarters, allowing the company to implement company-wide energy policies. Target is also implementing a number of other energy-saving initiatives in its stores, including:

- Retrofitting lighting systems to reduce energy consumption by 22 percent;
- Installing light-emitting diodes (LED) in place of neon for all new stores’ exterior signage, resulting in an 80 percent energy savings and reduced maintenance costs;
- Implementing motion-sensor lighting in stock rooms.

Three of Target’s stores have received LEED certification. The company is also expanding its Demand Management program to better monitor and control energy use.

#### *Renewable Energy*

Target currently purchases 0.53 percent of its electricity from renewable energy sources. In July 2006, the company negotiated a multi-year energy-supply contract with Minnesota Methane, which supplies Target energy from a plant in the Los Angeles Basin. This contract fulfills Target’s resource adequacy (RA) capacity requirement and Target’s entire renewable portfolio standard (RPS) requirement for 2006 through 2009 for its operations in California.

Target has 18 stores in California that have rooftop photovoltaic solar panels installed on them. Each of these systems generates 20 percent of the store’s electrical needs and 50 percent of the typical daily peak energy needs. In 2009, Target will add three new stores in Hawaii, each of which will have a rooftop solar system.

#### *Emissions Trading*

Target does not have operations covered by the EU Emissions Trading Scheme.

#### *Products and Services*

Target says that it recognizes potential climate-related opportunities from shifting consumer demand “with the growing awareness of the environment, climate change and health and fitness.” Target says that it has already begun to offer its clients a wider selection of climate-related products, such as Energy Star-rated electronics, appliances and lighting. The company states: “As consumer awareness and concern over climate change grows, we strive to meet our guests’ expectations. As guests take a more active role in lowering their own carbon footprint, we want to be prepared to offer them the opportunity to do so. We will continue to identify appropriate partners, such as The Climate Group, to help enhance our credibility as well as educate our team members to ensure the issue remains top of mind.”

#### *Research & Development*

None identified.

#### *Supply Chain Management*

Target does not yet measure greenhouse gas emissions associated with the company’s supply chain. The company states in its CDP6 response: “[As] understanding grows, Target will expand its understanding of the impact of its supply chain on the environment; however, we realize this will be a complex project involving partnering with numerous suppliers to gather emissions data.”

# BEST BUY Co., INC.

STOCK EXCHANGE – BBY  
Big Box Retail

Best Buy has developed a greenhouse gas (GHG) emissions inventory, but has not yet publicly disclosed the inventory. The company recently announced an emissions reduction target which will be achieved in the next four years, and has also committed to achieving LEED certification for most new stores.

**Summary Score: 36**

## Company Information

Best Buy Co., Inc. (Best Buy) is a specialty retailer of consumer electronics, home office products, entertainment software, appliances and related services. The Company operates retail stores and Web sites under the brand names Best Buy, Five Star, Future Shop, Geek Squad, Magnolia Audio Video, Pacific Sales Kitchen and Bath Centers, and Speakeasy. Best Buy operates through a Domestic business segment and a separate International segment (comprised of its Canadian stores and services as well as its Chinese Best Buy and Five Star stores). At the end of fiscal 2008, Best Buy operated 928 stores and employed approximately 150,000 full-time, part-time and seasonal employees worldwide.

### Contact Information

**Chairman:** Richard M. Shulze

**CEO:** Bradbury H. Anderson

**Website:** [www.bestbuy.com](http://www.bestbuy.com)

**Address:** 7601 Penn Avenue South Richfield, MN 55423 United States

## Board Oversight

**Score: 4**

### Board Committee/Member

Best Buy's Board of Directors includes a Nominating, Corporate Governance, and Public Policy committee with responsibility for "responding to management's point of view regarding corporate social, political and environmental trends and public policy issues" and offering "advice and counsel to management regarding the effectiveness of the Company's social responsibility programs." The committee is entirely composed of independent board members.

### Board Role

In 2006 Best Buy's Board of Directors requested that the company establish a Corporate Social Responsibility Governance Committee. In addition, the full Board of Directors reviews the company's Corporate Social Responsibility report annually.

### Board Training

None identified.

## Management Execution

**Score: 10**

### CEO Leadership

None identified.

### Company Strategy

Best Buy says that it is "constantly seeking ways to reduce [its] environmental footprint," and is "currently designing a portfolio of emissions reduction options." The company's primary focus is energy efficiency, waste minimization, and recycling, focusing both on its products and operations. The company states: "We believe that if we first look at the environmental impact of what we sell in our stores, and the amount of energy our stores use to operate, we can then make better decisions and reduce our environmental impact as we continue to grow and expand into communities around the world."

## BEST BUY Co., INC.

<i>Executive Responsibility</i>	Best Buy's Corporate Responsibility Leadership Team, comprised of senior company executives, is responsible for managing the company's social and environmental initiatives, including climate change. Brenda Mathison, Director of Environmental Affairs, heads the company's environmental programs, including energy conservation initiatives. Mathison is responsible for reviewing the company's programs and metrics and preparing summaries presented to senior executive management.
<i>External Initiatives</i>	The company has joined the following external initiatives: US EPA Climate Leaders; US EPA SmartWay program.
<i>Employee Training</i>	In fiscal year 2008 Best Buy implemented extensive ENERGY STAR employee training programs across the United States to ensure that "customer needs for energy efficiency information could be met confidently." These programs earned Best Buy the ENERGY STAR Excellence in Appliance Retailing Award, and are now used as a model by the Department of Energy and the EPA.
<i>Executive Compensation</i>	None identified.

### Public Disclosure

Score: 3

<i>Annual Report</i>	No climate change mention.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	Best Buy discusses its energy conservation efforts in its annual corporate responsibility report. <b>Sustainability report:</b> <i>Think Ahead. Corporate Responsibility: Our Aspirations and Fiscal 2008 Performance Report</i> , June 2008 <b>URL:</b> <a href="http://www.bestbuyinc.com/assets/corporate_reponsibility/08_report/CSR_2008_Final.pdf">http://www.bestbuyinc.com/assets/corporate_reponsibility/08_report/CSR_2008_Final.pdf</a> <b>GRI Accordance:</b> G3 Draft
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	In its CDP6 response Best Buy acknowledges that "any government-imposed energy efficiency standard or regulatory measure to control carbon emissions may increase costs." However, the company believes these costs would represent "a relatively small proportion of Best Buy's cost base and would most likely be partially offset by increased efficiencies in energy consumption and use." Best Buy also notes that extreme weather events could impact the company's store locations or supporting infrastructure, rendering it unable to achieve projected revenue or perform operations. In addition, Best Buy acknowledges it is "exposed to the physical risks other industries are exposed to" through its supply chain.
<i>Public Policy</i>	None identified.

### Emissions Accounting

Score: 2

<i>GHG Emissions Inventory</i>	Best Buy joined the EPA's voluntary Climate Leaders program in 2007 and has since developed a GHG emissions inventory. The company has not yet publicly disclosed its emissions.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score:17

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Intensity)</b>	<b>8% per sq. foot</b>	<b>2005</b>	<b>2012</b>	<b>Global</b>

#### Target Details

Best Buy has publicly stated its GHG emissions reduction goal on the EPA Climate Leaders reporting website.

#### Target Achievement

None identified.

#### Renewable Energy

None identified.

#### Emissions Trading

None identified.

#### Energy Efficiency

In 2007 Best Buy announced that all new stores would meet the qualifications of the LEED certification, beginning in mid-2008. Best Buy's store prototype received LEED "pre-certified" approval in September 2008. Three new store locations are scheduled to open in Feb. 2009 and will be certified using the approved program. Best Buy has also partnered with the U.S Department of Energy in a multiple-year research project to reduce energy use by 50 percent in new stores and 30 percent in remodeled stores. The reduction in energy is being measured by a standard from the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), and Best Buy is already 15 percent below the standard.

In addition, in fiscal year 2008 Best Buy performed lighting retrofits at 31 retail locations to install high efficiency lighting. The company plans to continue these efforts through fiscal year 2009.

#### Products & Services

Best Buy says that it has identified "many opportunities that arise out of the changing regulatory environment." As the recipient of the ENERGY STAR's Excellence in Appliance Retailing Award, the company is expanding its efforts to market ENERGY STAR products in its stores. Best Buy estimates that energy saving in homes through the purchase of energy efficient products at its stores has resulted in a total energy savings of over 960 million kWh per year resulting in a reduction of 1.479 billion pounds of carbon. Best Buy states in its 2008 corporate responsibility report that its plans to focus specifically on reducing the environmental impacts of its products during fiscal year 2009.

#### Research & Development

None identified.

#### Supply Chain Management

According to the company, Best Buy's social and environmental responsibility team, located in Shenzhen, China, "invests significant time and resources to not only audit the factories where Exclusive Brands products are assembled, but to work with them to improve environmental processes."

In 2008 Best Buy made improvements to its logistics operations, decreasing the number of trucks on the road and eliminating over 18,000 trips for its transportation vendors. Best Buy has been an EPA SmartWay transportation program partner since 2007. In 2008, Best Buy announced a "no idling" commitment for retail and logistics transportation.



Lowe's has not made public a formal strategy to address the risks and opportunities posed by climate change. There is no evidence of board or executive leadership with respect to climate change, and the company has not publicly disclosed a greenhouse gas (GHG) emissions inventory or set emissions reduction targets. However, Lowe's has established an Energy Efficiency Policy, and has taken steps to enhance the efficiency of its stores and offer energy efficient products. The company has also voluntarily posted an "energy report" on its website to disclose the company's energy use trends. The company did not comment on this profile by deadline.

**Summary Score: 17**

## Company Information

Lowe's Companies, Inc. is the world's second largest home improvement retailer. The company offers a complete line of products and services for home decorating, repair, remodeling, and property maintenance. At the end of fiscal year 2007, the company operated 1,534 stores in Canada and the United States and employed approximately 160,000 full-time and 56,000 part-time employees.

### Contact Information

**Chairman/CEO:** Robert A. Niblock

**Website:** [www.lowes.com](http://www.lowes.com)

**Address:** 1000 Lowe's Boulevard Mooresville, NC 28117 United States

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 3**

*CEO Leadership* None identified.

*Company Strategy* Lowe's has established an Energy Efficiency Policy, which states: "Lowe's views energy efficiency measures in our facilities as one of the best opportunities to decrease operating costs as we develop new stores and retrofit existing stores." The company does not articulate a specific climate change strategy.

*Executive Responsibility* None identified.

*External Initiatives* The company joined the following external initiatives: USEPA ENERGY STAR; USEPA SmartWay Transport Partnership.

*Employee Training* None identified.

*Executive Compensation* None identified.

# LOWE'S COMPANIES, INC.

## Public Disclosure

Score: 3

<i>Annual Report</i>	In the company's 2007 Annual Report Lowe's briefly mentions its initiatives to promote energy efficient products and provide energy-saving information to its costumers.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	<p>The Lowe's website includes an "Efficient Homes" section with information about the company's ENERGY STAR products and other energy conservation measures. The company also discusses its efforts to reduce greenhouse gas emissions in its sustainability report. In addition, Lowe's has posted an energy report on its website that provides information on the company's energy consumption trends.</p> <p><b>Sustainability Report:</b> <i>Opportunity in Every Community. 2007 Social Responsibility Report</i>, May 2008 <b>URL:</b> <a href="http://images.lowes.com/2008/prj/SocialRes07.pdf">http://images.lowes.com/2008/prj/SocialRes07.pdf</a> <b>GRI Accordance:</b> None identified.</p>
<i>Carbon Disclosure Project</i>	Declined to participate.
<i>Public Policy</i>	None identified.

## Emissions Accounting

Score: 0

<i>GHG Emissions Inventory</i>	Lowe's has not publicly disclosed an emissions inventory. In response to a 2008 shareholder resolution however, the company agreed to develop a public climate change report disclosing its emissions. The company also agreed to include in the report discussions of physical and regulatory climate risk as well as its emissions management strategy.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score: 11

<i>Emissions Reduction Targets</i>	None identified.
<i>Target Achievement</i>	Not applicable.
<i>Energy Efficiency</i>	Lowe's states in its energy report: "Efficiency is a hallmark of Lowe's across all aspects of our operations...energy conservation is one of those aspects that has had our attention for over five years." The company uses a centralized energy management system to monitor its stores' energy use. Lowe's has also achieved LEED certification for its store in Southwest Austin, Texas and plans to construct LEED certified buildings for its new customer support center in Mooresville, NC. The company has retrofitted the lighting systems in two-thirds of its stores to increase efficiency; improvements include installing LED exist signs, skylights, and motion sensors. Beginning in 2002, Lowe's began installing highly efficient rooftop HVAC units in new stores and replacing the HVAC systems of its old facilities. The average energy use per Lowe's store has decreased 10 percent since 2004, and sales floor energy consumption has gone down by 40 percent.

## LOWE'S COMPANIES, INC.

*Renewable Energy* In 2007 Lowe's increased its renewable energy purchases to 86 million kilowatt hours, up from 7.9 million kilowatt hours in 2006. The company says that it intends to increase its total purchasing again in 2008.

Lowe's has also installed rooftop photovoltaic energy generating systems on four stores in Southern California, producing roughly 3.1 million kWh of energy.

*Emissions Trading* None identified.

*Products & Services* Lowe's says that it recognizes the company "is viewed by customers as the source for products to help them 'green' their lives." According to Lowe's, the number of ENERGY STAR products the company sells in a single year can save customers enough energy to eliminate greenhouse gases equivalent to more than 164,000 cars, reducing energy costs for customers by \$160 million in total. The company's ENERGY STAR product offering continues to grow each year.

*Research & Development* None identified.

*Supply Chain Management* In 2005 Lowe's joined EPA's SmartWay Transport Partnership, a collaboration between the EPA and the freight industry to reduce greenhouse gas emissions associated with shipping. Since joining the partnership, Lowe's has engaged with its shipping partners to reduce the GHG emissions associated with its transportation and freight delivery system by more than 466,000 tons of CO<sub>2</sub>e, saving 42 million gallons of diesel fuel. The company has increased its use of rail transport and has optimized the capacity of its fleet by implementing a more efficient distribution process. Lowe's has set a goal to have 90 percent of its products shipped by SmartWay Transport Partners by 2010.

Home Depot has not made public a formal strategy to address the risks and opportunities posed by climate change. There is no evidence of board leadership with respect to climate change, and the company has not developed a greenhouse gas (GHG) emissions inventory or set emissions reduction targets. Home Depot has also provided little public disclosure on its climate change initiatives. Still, the company has set energy efficiency standards for all of its facilities and is labeling products with a low environmental impact, such as energy efficiency light bulbs. The Home Depot was named the ENERGY STAR retail partner of the year for 2006 and 2007.

**Summary Score: 15**

## Company Information

Home Depot, Inc. is the largest home improvement specialty retailer in the world. The company's stores, which are full-service, warehouse-style stores, sell a wide assortment of building materials, home improvement and lawn and garden products and provide a number of services. As of the end of fiscal 2007, Home Depot operated 2,234 stores and employed approximately 331,000 associates. The company operates in the United States, Canada, Mexico, and China.

### Contact Information

**Chairman/CEO:** Frances S. Blake

**Website:** [www.homedepot.com](http://www.homedepot.com)

**Address:** 2455 Paces Ferry Rd. N.W. Atlanta, GA 30330 United States

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 5**

*CEO Leadership* None identified.

*Company Strategy* The Home Depot established nine Environmental Principles, but these do not include climate-specific commitments beyond a pledge to "conserve natural resources by using energy and water wisely and seek further opportunities to improve the resource efficiency of our stores."

*Executive Responsibility* The Home Depot's Environmental Council is dedicated to addressing the environmental impact of the company's operations and products. The group is comprised of leaders from each of the company's different functions. Ron Jarvis, Senior Vice-President of Environmental Innovation, is chairman of the Council.

*External Initiatives* The company joined the following external initiatives: US EPA ENERGY STAR.

*Employee Training* None identified.

*Executive Compensation* None identified.

# THE HOME DEPOT, INC.

## Public Disclosure

Score: 3

<i>Annual Report</i>	The Home Depot briefly mentions its Eco Options program (see below) in the company's 2007 Annual Report.
<i>Securities Filings</i>	The Home Depot discusses its climate change initiatives in Item 1 (Business) of its Form 10-K. In this section the company provides information on its energy efficiency initiatives, for which is budgeted \$50 million in fiscal 2007.
<i>Other Disclosure</i>	The Home Depot has created a detailed "Eco Options" section for its website with information about the company's Eco Options products.
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Not Public)
<i>Public Policy</i>	None identified.

## Emissions Accounting

Score: 1

<i>GHG Emissions Inventory</i>	None identified.
<i>Certified CO<sub>2</sub> Offsets</i>	In 2006 the Home Depot donated \$200,000 to the Conservation Fund Go Zero Program to offset the carbon emissions from the company's headquarters through reforestation in the Atlanta area.

## Strategic Planning

Score: 6

<i>Emissions Reduction Targets</i>	None identified.
<i>Energy Efficiency</i>	In fiscal 2007 the Home Depot budgeted approximately \$50 million for energy efficiency related projects. By replacing HVAC units in approximately 200 existing stores and switching to the use of T-5 lighting in approximately 600 existing stores, the company estimates that it saved approximately \$20 million in energy costs since fiscal 2006. In addition, The Home Depot has implemented strict energy efficiency standards for all of its facilities, reducing 907 million pounds of GHG emissions.
<i>Renewable Energy</i>	None identified.
<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	The Home Depot launched its Eco Options program in 2007, a labeling initiative that allows customers to easily identify products with a low environmental impact. Through this program the Home Depot has actively promoted a number of energy-efficient ENERGY STAR products, and the company gave away one million compact fluorescent light bulbs as part of the Eco Options launch. The company has introduced a label for nearly 3,000 products but expects this number to grow to 6,000 products by 2009. The Home Depot was named the ENERGY STAR retail partner of the year for 2006 and 2007.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	Home Depot says that it works actively with its suppliers to bring more ENERGY STAR products to market. The company has also implemented a Supplier Social and Environmental Responsibility Program to ensure that its suppliers "adhere to the highest standards of social and environmental responsibility."

# COSTCO WHOLESALE CORP.

NASDAQ – COST  
Big Box Retail

Costco has not made public a formal strategy to address the risks and opportunities posed by climate change. There is no evidence of board leadership with respect to climate change, and the company has not developed a greenhouse gas (GHG) emissions inventory or set emissions reduction targets. However, the company recently created a Corporate Sustainability and Energy Group to manage its climate change initiatives and it is planning to complete 13 large-scale photovoltaic installations by the end of 2008. The company did not comment on this profile by deadline.

**Summary Score: 14**

## Company Information

Costco Wholesale Corporation operates membership warehouses offering products in a wide range of merchandise categories. At Sept 2, 2007, Costco operated 488 membership warehouses, mainly in the United States, Canada, and United Kingdom. The company also operates several warehouses in Japan, Korea, and Taiwan. Costco employs roughly 127,000 full-time and part-time employees.

### Contact Information

**Chairman:** Jeffrey H. Brotman

**CEO:** James D. Sinegal

**Website:** [www.costco.com](http://www.costco.com)

**Address:** 999 Lake Drive Issaquah, WA 98027 United States

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 5**

*CEO Leadership* None identified.

*Company Strategy* Costco states in its 2007 Annual Report: "As Costco continues to grow, we are mindful of our responsibilities as an environmental steward in managing our new construction and our ongoing operations." The company does not articulate a specific strategic response to climate change, but notes that energy efficiency measures offer cost-cutting opportunities to the company. Costco states: "We, like other retailers, consume energy; and energy conservation offers Costco one of the best opportunities to reduce our utility bills and our greenhouse gas emissions."

*Executive Responsibility* In 2007 Costco created the Costco Corporate Sustainability and Energy Group. The company says that the group is working to "gather data and convert program results into a greenhouse gas emission accounting framework using internationally accepted protocols and environmental standards."

*External Initiatives* The company has joined the following external initiatives: US EPA ENERGY STAR; US EPA Climate Protection Partnership.



# COSTCO WHOLESALE CORP.

*Employee Training* Costco implemented a Commute Trip Reduction program 13 years ago, offering subsidies to employees to “vanpool.” The company now has 65 vans at its corporate offices for employee commuting.

*Executive Compensation* None identified.

---

## Public Disclosure

**Score: 3**

*Annual Report* Costco’s 2007 Annual Report includes two pages describing the company’s initiatives to improve the energy efficiency of its warehouses, reduce waste, and sell energy-efficiency products such as compact fluorescent light bulbs.

*Securities Filings* No climate change mention.

*Other Disclosure* None identified. Costco says that it intends to publish a sustainability report by the end of 2008.

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* Costco does not discuss climate-related risks in its CDP6 response.

*Public Policy* None identified.

---

## Emissions Accounting

**Score: 0**

*GHG Emissions Inventory* Costco has not conducted a GHG emissions inventory. The company states in its 2007 Annual Report: “To measure and monitor our greenhouse gas emission impact we are gathering information to create a benchmark of our company-wide CO<sub>2</sub> emissions in order to set up future key performance indicators.”

*Certified CO<sub>2</sub> Offsets* None identified.

---

## Strategic Planning

**Score: 6**

*GHG Emissions Targets* None identified.

*Target Achievement* None identified.

*Energy Efficiency* Costco’s metal pre-engineered warehouse design, which the company commonly uses in building new stores, is consistent with the requirements of the Silver Level LEED certification.

*Renewable Energy* Costco plans to complete 13 large-scale photovoltaic installations by year-end 2008.

*Emissions Trading* None identified.

*Products & Services* Costco notes in its 2007 Annual Report that its sales of compact fluorescent light bulbs increased to more than 28 million bulbs in 2007, up from 17 million in 2006.

*Research & Development* None identified.

*Supply Chain Management* Costco is in the process of replacing its plastic clamshell packaging with paper-blister hybrid packaging. The company has also implemented a number of waste reduction and recycling initiatives; for example, customers are encouraged to use leftover cardboard boxes from shipping to carry home their purchases.

# BED, BATH & BEYOND INC.

NASDAQ – BBBY  
Big Box Retail

Bed, Bath, and Beyond's climate change strategy acknowledges the importance of addressing climate change issues across all aspects of the company's business—including its operations, supply chain, and products. However, there is no evidence of board leadership with respect to climate change, and the company has not completed a greenhouse gas (GHG) emissions inventory or set emissions reduction targets. Bed, Bath, and Beyond has also provided little public disclosure on its climate change initiatives. The company declined to comment on this profile.

**Summary Score: 10**

## Company information

Bed Bath & Beyond Inc. and its subsidiaries is a chain of retail stores, operating under the names Bed Bath & Beyond, Christmas Tree Shops, Harmon and Harmon Face Values and buybuy BABY. The company sells a wide assortment of merchandise, including domestics merchandise and home furnishings as well as food, giftware, health and beauty care items and infant and toddler merchandise. Bed, Bath & Beyond operates 971 stores in 49 states, the District of Columbia, Puerto Rico and Canada. As of March 1, 2008, the company employed approximately 39,000 persons in full-time and part-time positions.

### Contact Information

**Chairman:** Warren Einsenberg (Co-Chair), Leonard Feinstein (Co-Chair)  
**CEO:** Steven H. Temares

**Website:** [www.bedbathandbeyond.com](http://www.bedbathandbeyond.com)

**Address:** 650 Liberty Avenue Union, NJ 07083 United States

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 7**

*CEO Leadership* Co-chairmen Warren Einsenberg and Leonard Feinstein and CEO Steven H. Temares provide information about the company's energy efficiency and renewable energy initiatives in their annual letter to shareholder preceding the 2006 Annual Report. The 2005 annual letter to shareholders also stated: "The broader concerns over energy costs, our nation's dependence on foreign oil, the rate of consumption and environmental impacts of fossil fuels, deforestation, and global warming, must be our concerns as well." Messrs. Einsenberg, Feinstein, and Temares do not address these issues in the company's 2007 annual report.

*Company Strategy* In its CDP5 response Bed, Bath & Beyond states: "Our Company, as described in more detail below, has long been committed to a course of conservation in terms of our own energy use. Our continued success in doing so may help mitigate risks associated with energy shortages or regulation. We are aware that our conservation efforts can and should extend now from our own operations outward, back through our own supply chain and forward, to our customers, by presenting them with merchandise that may aid them in their own efforts at home."

# BED, BATH & BEYOND INC.

*Executive Responsibility* In 2006 Bed, Bath & Beyond established a committee comprised of senior management to oversee and coordinate the company's efforts in the area of energy conservation and other environmental issues, and to evaluate the company's public disclosure on these issues. The committee includes several Vice Presidents and Director-level personnel, and pulls together representatives from across the business, including operations, procurement, merchandise buying and allocation, legal/disclosure compliance, advertising/branding, supply chain, construction and facilities.

*External Initiatives* None identified.

*Employee Training* None identified.

*Executive Compensation* None identified.

---

## Public Disclosure

**Score: 0**

*Annual Report* No climate change mention.

*Securities Filings* No climate change mention.

*Other Disclosure* None identified.

*Carbon Disclosure Project* Answered questionnaire (Not Public)

*Public Policy* None identified.

---

## Emissions Accounting

**Score: 0**

*GHG Emissions Inventory* None identified.

*Certified CO<sub>2</sub> Offsets* None identified.

---

## Strategic Planning

**Score: 3**

*Emissions Reduction Targets* None identified.

*Energy Efficiency* Bed, Bath, & Beyond retrofitted nearly all its stores opened prior to 2001 with enhanced energy management systems to control energy consumption. The company has since undertaken several initiatives to improve the energy efficiency of its operations, including opening a store that incorporates a range of design and technology features to reduce energy consumption such as skylights coupled with automatic light dimmers and advanced control programming in a system. The store also features compact fluorescent lighting in vignettes, LED building sign lighting instead of neon, and a number of other conservation technologies including solar sink faucets that use ambient light to power the equipment that automatically turns water on and off, saving both energy and water. The company also buys hybrid cars for certain personnel whose jobs entail frequent car travel.

*Renewable Energy* Bed, Bath & Beyond has plans to install solar energy systems on four New Jersey facilities. The company estimates that the combined solar power installations should conserve 109,500 barrels of oil and reduce carbon dioxide by 38 million pounds over 30 years.

## BED, BATH & BEYOND INC.

<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	None identified.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	None identified.

Tesco has implemented a three-pronged climate change strategy to reduce greenhouse gas (GHG) emissions from its own operations, engage external stakeholders in efforts to promote low-carbon solutions, and empower customers to reduce GHG emissions through product labeling and promotion of low-carbon products. This strategy is embedded across the company's business, and Tesco uses Key Performance Indicators to benchmark progress and set climate change goals. Tesco has pioneered efforts to promote carbon labeling, launching a pilot program to label 20 products with information about their carbon footprints. The company has set targets to reduce its own energy use and GHG emissions, and it is also actively engaged in public policy discussions to support and define a regulatory framework for GHG emissions reduction.

**Summary Score: 78**

## Company Information

Tesco PLC, based in the United Kingdom, is the third-largest grocer in the world and the largest retailer in the U.K. The company operates roughly 2,100 stores in the U.K. and 1,600 stores in Ireland, Central Europe, Asia, and the US. Tesco's operations include convenience and gasoline retailing (Tesco Express), small urban stores (Tesco Metro), superstores (Tesco Extra), and financial services (Tesco Personal Finance). Tesco.com is Britain's leading Internet delivery service. Tesco's average number of employees for 2007 was 318,283 full-time equivalents.

### Contact Information

**Chairman:** David E. Reid

**CEO:** Terry Leahy

**Website:** [www.tesco.com](http://www.tesco.com)

**Address:** Tesco House Delamare Road, Cheshunt, ENG EN8 9SL, United Kingdom

## Board Oversight

**Score: 3**

### Board Committee/Member

None identified.

### Board Role

Tesco's full Board of Directors reviews the company's Corporate Responsibility strategy twice a year.

### Board Training

None identified.

## Management Execution

**Score: 18**

### CEO Leadership

In February 2008, Tesco CEO Sir Terry Leahy stated: "Our work to deliver sustainable consumption is not some add-on extra...Cutting carbon emissions is now locked into our business strategy." Sir Terry also made the keynote speech at the launch of the Carbon Disclosure Project in London in October 2007. At the company's annual supplier conference, Sir Terry addressed over one thousand suppliers about climate change.

Sir Terry also reiterates the company's climate change commitments and achievements in his annual letter to shareholders in Tesco's 2008 Annual Report. He states: "My strong belief is... that being green will be a good way to grow and add value for shareholders whilst discharging our responsibilities to other stakeholders. That is why Tesco has taken a lead on these matters."

## *Company Strategy*

Tesco launched its climate change strategy in 2007. The company outlines its climate change position in its 2008 Corporate Responsibility Review, stating:

There is a growing consensus on the science of climate change. It is accepted by governments, businesses, NGOs and people around the world... Critics argue that supermarkets are part of the problem because they often run energy-intensive stores selling food and other products that have traveled long distances. We believe that retailers can play a positive role in tackling climate change. Tesco has never ducked a challenge and we intend to lead the way by dramatically reducing our own carbon footprint and making low-carbon products accessible and affordable for consumers.

Tesco has established a three-pronged strategy for addressing climate change at the company. The first objective is to “set an example” by reducing GHG emissions from its own operations. The company has set an emissions reduction target and has developed specific plans to achieve its goals. Tesco is also committed to transparent reporting of its carbon footprint.

The company’s second priority is to “work with others,” or to engage with external stakeholders. This commitment includes investing in new technology and funding new research on low-carbon solutions.

Tesco’s third focus is to “empower customers” to reduce their emissions by providing information and products that allow them to make lower-carbon choices. The company aims to “make low-carbon choices easy and affordable.”

## *Executive Responsibility*

Tesco says that its climate change strategy is embedded in teams across the business – from Marketing and Property to International – with a focused core team in Corporate Affairs to drive the overall direction of the company’s initiatives. The Corporate Responsibility Committee meets at least four times a year to develop the company’s corporate responsibility strategy, review relevant policies and practices, and monitor progress. In addition, each of Tesco’s international businesses has a Corporate Responsibility Committee led by the Chief Executive of that country or another senior Director. Tesco’s Energy Purchasing team is responsible for long term price forecasting which takes into account the impact of climate-related regulatory measures such as the EU ETS and the Renewables Obligation.

Tesco’s Executive Committee receives regular updates on Tesco’s corporate responsibility performance and plays a key role in assessing future risks and opportunities and developing the company’s strategy on issues such as climate change.

Tesco defines its business strategies and measures its performance through the Steering Wheel, a management tool used by all levels of the business that sets out specific business objectives and Key Performance Indicators (KPIs) to measure progress in achieving these objectives. The company’s energy and climate-related initiatives are included in one of the Wheel’s five sections, with specific targets to reduce energy consumption and KPIs to assess performance in this area. Using the Steering Wheel tool, each business unit is responsible for developing energy strategies to achieve these targets.

Tesco have placed Energy Champions (members of staff specifically trained to inspire and motivate colleagues to save energy) in every store. In addition, Tesco has tasked every



management team in a store with making regular energy efficiency checks as part of their everyday routines and ensuring the energy-related KPIs are met.

*External Initiatives* Tesco's US chain, Fresh & Easy, is a pilot member of the LEED Volume Certification Program. Tesco has also partnered with the United Nations Environment Program to engage local communities in South Korea and Thailand to promote understanding of climate change issues. Tesco is also a member of the European Union Corporate Leaders Group on Climate Change.

*Employee Training* Tesco invites external experts to address the Corporate Responsibility Committee twice a year and comment on the company's corporate responsibility strategy, performance, and reporting. Certain members of staff, called Energy Champions, are trained specifically to motivate and educate colleagues on saving energy. Tesco also provides training and guidance to country and corporate-level representatives responsible for emissions reporting.

*Executive Compensation* Tesco has established Key Performance Indicators (KPIs) to gauge the company's progress on a variety of issues, including climate change. The remuneration of senior management is determined by performance against these KPIs, with bonuses reflecting the level of achievement on each segment of the Steering Wheel.

## Public Disclosure

**Score: 10**

*Annual Report* In the Business Review section of its 2008 Annual Report, Tesco describes its progress towards achieving the company's climate-related goals. The report also describes some of the Key Performance Indicators related to emissions reduction.

*Securities Filings* Tesco has not filed a Form 10-K or 20-F with the US Securities and Exchange Commission.

*Other Disclosure* Tesco provides a robust discussion of its climate change strategy and initiatives on its website and in its annual sustainability report.

**Sustainability Report:** *More than the weekly shop: Corporate Responsibility Review 2008*, May 2008

**URL:** [http://www.tescoreports.com/downloads/tesco\\_crr.pdf](http://www.tescoreports.com/downloads/tesco_crr.pdf)

**GRI Accordance:** None identified.

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* In its CDP6 response Tesco identifies three areas where the company faces physical risks from climate change. First, the company notes that climate change may impact store operations – particularly in areas prone to flooding. Second, Tesco points to risks to its supply chain, noting that climate change may cause changes in growing seasons or rainfall patterns that could “put existing sources of products...at risk and bring instability into the supply chain.” This could create a commercial risk for the company, because, as the company states, “if suppliers are no longer able to supply us due to resource scarcity, we will need to form new commercial relationships and this may be difficult, especially if the number of suppliers reduces.” Third, Tesco identifies changing demand as an area of risk, as climate change may affect demand patterns for the company's products and services. Tesco states: “One of the biggest risks to business...is that of being slow to identify and respond to growing consumer demand for

business to help lead the response to climate change, both through our own operations and by providing the products, services and information to enable people to respond effectively in their own lives.” In addition to these physical risks, Tesco identifies climate-related investment risks as a significant area of risk for the company as well. According to the company, “Investors may target companies much more directly on their environmental performance or lack of.”

## *Public Policy*

Tesco says that it has “adopted a pro-active approach to working with policy makers in all the markets” where the company operates. The company has advocated its position that “government has an important role to play in providing a regulatory framework that supports and stimulates the transition to a low-carbon economy” and must develop new, comprehensive policies that incentivise business to invest in energy efficiency, renewable energy, and other low-carbon technologies. According to Tesco, current regulation consists of “hundreds of pages of overlapping policy guidance covering a wide range of often competing objectives,” and such “complex, inconsistent and overlapping regulations...impede progress towards meeting climate change objects and should be streamlined.” Tesco also encourages governments to avoid regulation that is based on penalties and prohibition, rather than incentives.

According to Tesco, “Business taxes and incentives must be redirected from a high-carbon to a low-carbon economy with a greater focus on promoting demonstration, early deployment and development of low carbon technologies.” The company suggests the following regulatory measures:

- A longer term framework of support for renewable technology. Tesco supports feed-in tariffs, a type of legislative incentive for investment in renewable technology.
- New grant funding schemes and making existing schemes more accessible.
- An extension of Enhanced Capital Allowances.
- The greater use of tax relief. Business rates in particular could be used as a mechanism to encourage investment in low carbon technology and energy efficiency.

In the UK, Tesco has provided input to government consultations on regulatory initiatives such as the Carbon Reduction Commitment. Tesco advocates for a carbon trading scheme to be implemented “as soon as possible” in the UK because “establishing a carbon price will be a key driver for investment in innovation, providing the certainty and incentive required for long-term investment decisions.”

In Europe, Tesco works with both the European Commission and the European Parliament on policy development for climate-related issues such as carbon-labeling; in 2008 Tesco presented to the European Parliament Climate Change Committee on its climate change strategy and carbon labeling work. As a member of the European Retail Round Table (ERRT), Tesco led a public commitment by ERRT members to support the European Union’s 2020 energy goals.

## Emissions Accounting

Score: 14

GHG Emissions Inventory Year: 2007 Facility/Region: Global Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	1,705,297
Scope 2 (Indirect –Electricity)	2,691,388
Scope 3	—
Travel	69,804
Logistics	—
Products	—
Supply Chain	—

**Accounting Methods** Tesco worked with Environmental Resources Management Ltd. to design a carbon footprinting tool that measures the company's emissions and tracks its performance against the emissions and energy-related KPIs. Each country measures and reports its carbon emissions on a quarterly basis. Business travel is measured by collecting travel data for car journeys, rail trips and short and long haul flights.

**External Verification** Tesco's inventory was verified by Environmental Resource Management.

**Certified CO<sub>2</sub> Offsets** In 2007 Tesco partnered with UNEP, the Ministry of Natural Resources and the Foundation for Khao Yai National Park Protection on an initiative to plant nine million trees in Thailand's natural forest reserves over five years. It is estimated that the project will reduce atmospheric CO<sub>2</sub>e by nine million tonnes over 40 years.

## Strategic Planning

Score: 33

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Intensity)	50% CO <sub>2</sub> e per case	2006	2012	Global distribution fleet
GHG Emissions (Absolute)	50%	2006	2020	Global existing stores and distribution centers
GHG Emissions (Absolute)	50% on average	2006	2020	Global new stores after 2006

**Target Details** Tesco has also set a goal for all new buildings to emit on average 50 percent less CO<sub>2</sub>e by 2020, compared to a 2006 baseline. In addition to its long-term targets, Tesco has set year-to-year targets to achieve its long-term goals. For example, the company has set a goal to reduce emissions from its existing stores 5 percent by 2009 as a step to achieving its larger target of a 50 percent reduction by 2020.

<i>Target Achievement</i>	<p>Tesco set a previous target to reduce its energy efficiency use per square foot in the UK by 50 percent by 2010, compared to a 2000 baseline. The company achieved this target two years early. In addition, while Tesco's global emissions have increased due to growth (up 8.6 percent compared to 2006), the company has reduced its overall carbon intensity by 4.7 percent (measured as emissions per square foot of net sales area). Tesco also reduced emissions from its UK fleet by over 10 percent last year.</p>
<i>Energy Efficiency</i>	<p>In calculating its carbon footprint, Tesco has identified key areas of impact for its business. For example, Tesco has determined that heating and lighting, refrigeration, and transportation of goods contribute the most emissions to the company's total carbon footprint. Tesco has taken steps to address each of these areas of impact.</p>
	<p>Recognizing that 67 percent of the company's total carbon footprint is comprised of emissions from electricity and natural gas use, Tesco has launched several initiatives to reduce in-store energy use. Tesco is planning to implement a new energy efficient store design that "will provide a new blueprint for the way [the company] builds stores around the world in the future," moving energy efficient stores "from the exception to the norm." Tesco plans to spend £500m over the next five years on initiatives to reduce the company's energy use. This year the company invested £86 million in energy-saving technology for its stores, including low-energy lighting, energy-efficient bakery ovens, wind turbines, combined heat and power (CHP), tri-generation and hanging curtains on freezer doors.</p>
	<p>Tesco has built energy efficient prototype stores in seven countries to "trial new leading-edge technology." In the UK, the company recently opened its fourth prototype, which achieves a 60 percent reduction in GHG emissions compared to the company's standard stores. Features being tested at this store include a sustainable timber frame, natural lighting through the roof, rainwater harvesting, a ground source heat pump and battery-powered delivery vans. Tesco is also moving forward with a program to phase out all refrigeration based on HFC, a potent greenhouse gas.</p>
	<p>Tesco's US branch, Fresh &amp; Easy, is a pilot member of the LEED Volume Certification Program. Through this program, Fresh &amp; Easy will focus on reducing its footprint through a variety of measures, including skylights on new buildings, automatic-dimming lighting systems, increased insulation, LED lighting, and other efficiency upgrades. Fresh &amp; Easy stores even offer special parking spaces for customers with hybrid vehicles.</p>
<i>Renewable Energy</i>	<p>Tesco has established a £100m Sustainable Technology Fund to support large-scale carbon reduction technologies for its stores, distribution centers and supply chain. The fund is solely dedicated to investment opportunities in low-carbon technologies that are not yet economically viable. Last year, the fund spent £22 million on large-scale wind and biomass initiatives. The fund was also used for a number of smaller projects, including: a) wind turbines on store roofs and in parking lots; b) ground source heat pumps; and c) photovoltaic cells to power the tills in stores.</p>
	<p>Tesco has launched several small-scale renewable energy projects at its stores across the globe. In Hungary, the company is installing over 10,000 sq. ft. of solar panels. At three distribution centers, Tesco is installing rotating solar panels that track the sun and maximize the amount of solar energy captured. In Turkey, Tesco-Kipa opened two new stores using solar</p>

power for their checkouts, reducing annual CO2e emissions by 66 tonnes. Fresh & Easy now has California's largest solar installation at its distribution centre and a similar large installation is planned in the Czech Republic.

*Emissions Trading* None identified.

*Products & Services* Tesco states in its CDP6 response: "At Tesco we believe that we and our customers can be part of the solution to tackling climate change. A key element of our strategy is to 'turn green consumption into mass consumption'. With roughly 33m customers globally, helping customers to make greener choices is one of the biggest impacts we can make." Tesco has taken a number of steps to take advantage of climate-related commercial opportunities.

The company is expanding its products and services into new areas, including home energy efficiency products. In the past 12 months, Tesco's sales of environmentally-friendly products have grown by 50 percent, and in the US, Fresh & Easy stores sell only energy efficient light bulbs and have designated specific parking spaces in their lots for hybrid vehicles.

Tesco has committed to providing customers with information about the embedded emissions of their products through a carbon labeling initiative. The company recently launched a pilot project for 20 products sold in UK stores—including detergents, light bulbs, potatoes, and orange juice—labeling each product with its full carbon footprint, including emissions associated with the product for its entire lifecycle, from production to end use and disposal. The goal of the initiative is to make "low-carbon choices easy and affordable." Tesco plans to roll out carbon labeling to other products this year and will conduct research to understand how customers are using the information. In addition to carbon labeling, Tesco places a "By Air" sticker to identify air freighted products. The company achieved its target of limiting air freighted produce to comprise less than 1 percent of its stock.

Tesco also has cut its prices for energy efficient products to reduce costs for customers choosing low-carbon products. By cutting the price of energy efficient light bulbs by 50 percent, the company quadrupled its sales of the product. Tesco met its target to sell 10 million energy efficient light bulbs over one year. Tesco has launched its "Tesco Greener Living" brand this year. Tesco also offers a low cost insulation service.

*Research & Development* In 2007 Tesco launched a five-year, £25m funding program for a new Sustainable Consumption Institute (SCI) at the University of Manchester. The SCI, which has pledged to make all of its research freely and publicly available, was established to "develop research to define and accelerate the steps required to make a successful transition to a low-carbon economy." Tesco plans to work with the University of Manchester to develop areas for research.

*Supply Chain Management* Tesco is working with ERM Ltd. to measure its total supply chain footprint by assessing the emissions associated with its suppliers and customers. The company plans to release the results of this work in the near future. Tesco is also a founding member of the Carbon Disclosure Project (CDP) Supply Chain Collaboration and is working with suppliers, including Coca-Cola and Unilever, to find ways of cutting emissions in the supply chain. Tesco has plans to install a number of Coca-Cola's natural refrigeration units and to achieve distribution

efficiencies with Unilever that would cut 173,000 lorry miles and reduce packaging by 25 percent by 2010.

Tesco has also undertaken a number of initiatives to reduce emissions associated with distribution. In 2007 the company reduced carbon emissions from its distribution systems across global operations by 4.7 percent per case delivered. Tesco has enhanced its efforts to improve space utilization in its vehicles, work with suppliers to reduce the number of empty trips made by its fleet, and change its distribution network in the UK. The company estimates that these initiatives have reduced 2.89 million miles run by its fleet annually. Tesco has also increased its efforts to use alternatives to road transport in the UK by increasing the space available to suppliers on the Tesco train and increasing transportation via waterways. In its Shrewsbury store, Tesco now uses battery powered, zero-emission home delivery vans.

In addition to addressing its own operations, Tesco is enhancing its monitoring and reporting of emissions from freight contracted by Tesco to be distributed internationally between suppliers and Tesco depots.



Safeway was the first retailer to join the Chicago Climate Exchange and the California Climate Action Registry. The company has established a greenhouse gas (GHG) Reduction and Sustainability Initiative, and is currently undergoing an emissions audit to develop a GHG emissions inventory for 2007. The company has also set both a GHG emissions reduction target and a renewable energy target, and it is currently developing approximately two dozen solar projects across California.

**Summary Score: 48**

## Company Information

Safeway is a food and drug retailer with operations in the United States and several Canadian provinces. The company's stores offer a wide selection of food and general merchandise and feature a variety of specialty departments such as bakery, delicatessen, floral and pharmacy. In support of its retail operations, Safeway has an extensive network of distribution, manufacturing and food-processing facilities. At year-end 2007 Safeway operated 1,743 stores and had 201,000 full-time and part-time employees.

### Contact Information

**Chairman/CEO:** Steven A. Burd

**Website:** [www.safeway.com](http://www.safeway.com)

**Address:** 5918 Stoneridge Mall Rd., Pleasanton, CA 94588 United States

## Board Oversight

**Score: 5**

### Board Committee/Member

Nominating and Corporate Governance Committee

### Board Role

The Nominating and Corporate Governance Committee of Safeway's Board of Directors has the responsibility to periodically review social and environmental issues affecting the company.

### Board Training

None identified.

## Management Execution

**Score: 11**

### CEO Leadership

CEO Steven Burd states in his 2007 annual letter to shareholders: "Our environmental achievements in 2007 included purchasing 87 million kilowatt-hours of renewable energy, recycling approximately 500,000 tons of materials for reuse, and converting virtually our entire U.S. company-owned truck fleet to run on cleaner-burning biodiesel fuel."

### Company Strategy

As part of Safeway's "Commitment to the Environment," the company has established a GHG Reduction and Sustainability Initiative. Safeway states: "We launched a comprehensive, long-term Greenhouse Gas (GHG) and Sustainability Initiative with the goal to reduce our company's carbon footprint and improve air quality and the environment in the communities we serve. Toward that end, we set out to determine Safeway's current carbon baseline so we could implement cost-effective measures to reduce the baseline, improve profitability and achieve environmental sustainability." Safeway also says that "a central focus of this strategy is employee awareness of climate change and the tools to help manage its impacts. Employee education, energy conservation, process improvement, efficient building design, recycling and

# SAFWAY INC.

other key elements of responsible environmental stewardship are critical to managing the future performance of our sustainability efforts.”

*Executive Responsibility* Executive Vice President, Chief Strategist and Administrative Officer Larree Renda oversees environmental/sustainability reporting and projects.

*External Initiatives* Safeway has joined the following initiatives: Chicago Climate Exchange; California Climate Action Registry; EPA’s GreenPower Partnership Program; EPA’s Smartway Transport Partnership; EPA’s Grow & Go Partners Program; U.S. Green Building Council’s LEED Retail Portfolio Program.

*Employee Training* Safeway “strives to educate customers about energy management and about [its] participation in numerous federal and state programs aimed at reducing energy use in stores and other facilities.” The company incorporates environmental training in its New Employee Orientation, Retail Leadership Development and Safety Champions programs. Safeway’s “Power to Save” employee education initiative includes 10 easy energy-saving tips for employees who work in the company’s stores. Each month a different energy-saving strategy is played via video in a continuous loop in employee break rooms. Safeway also includes periodic environmental video spots and stories in the electronic and print versions of the employee newsletter, In Focus.

In addition, Safeway is implementing an ongoing employee communication and education program regarding Greenhouse Gas (GHG) emissions, environmental stewardship and the company’s sustainability efforts. Safeway developed an employee environmental intranet site that includes educational materials and tools for employees to identify improvement opportunities at work and manage their personal carbon footprint at home. This online resource includes a carbon calculator with renewable wind energy purchase options and a reduced-cost employee solar program with one of Safeway’s solar developers.

*Executive Compensation* None identified.

## Public Disclosure

**Score: 3**

*Annual Report* Safeway briefly mentions its renewable energy purchases and other GHG reduction initiatives in its 2007 Annual Report.

*Securities Filings* No climate change mention.

*Other Disclosure* Safeway discusses its environmental commitments and initiatives on its website and in its 2007 sustainability report.

**Sustainability Report:** *Our Values at Work: 2007 Corporate Social Responsibility Report, Investing in our Environment: 2007 Summary Report Environmental Initiatives*

**URL:** [http://media.corporate-ir.net/media\\_files/irol/64/64607/Corp\\_Social07.pdf](http://media.corporate-ir.net/media_files/irol/64/64607/Corp_Social07.pdf)

**GRI Accordance:** None identified.

*Carbon Disclosure Project* Declined to participate.

*Public Policy* None identified.

## Emissions Accounting

Score: 11

GHG Emissions Inventory    Year: 2000    Facility/Region: U.S. Domestic    Protocol: Other

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	366,113
Scope 2 (Indirect –Electricity)	2,252,432
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

*Accounting Methods*    Safeway's most recent emissions data reflects emissions data from 2000, but the company is currently conducting an emissions audit for 2007, according to the protocol outlined by the Chicago Climate Exchange.

*External Verification*    Safeway's emissions inventory has been audited for both the Chicago Climate Exchange (by Financial Industry Regulatory Authority) and the California Climate Action Registry (by Tetra Tech, Inc.).

*Certified CO<sub>2</sub> Offsets*    None identified.

## Strategic Planning

Score: 18

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Absolute)	6%	2000	2011	U.S. Domestic
Renewable Energy	2.5%	2005	2009	U.S. Domestic

*Target Details*    Safeway's membership in the Chicago Climate Exchange contains a legally-binding commitment to reduce greenhouse gas emissions 6 percent from year-2000 levels by the end of 2010 in 1.5 percent increments starting in 2007.

*Target Achievement*    Safeway is currently completing an audit to assess progress on its target to reduce emissions by 1.5 percent below its 2000 emissions baseline. The company expects to have achieved this target. In 2007, Safeway achieved the following GHG emissions reductions:

- 191,000 metric tons CO<sub>2</sub>e through strategic energy purchases;
- 110,000 metric tons CO<sub>2</sub>e through the application of efficient technology, process improvements and education;
- 100,000 metric tons CO<sub>2</sub>e through a wide range of transportation initiatives and alternative fuels application;
- 178,000 CO<sub>2</sub>e metric tons through recycling.

*Energy Efficiency* Safeway has an ongoing program of pursuing energy efficiency in its buildings for both new and retrofit construction. These efforts are underway in its retail, manufacturing, distribution and corporate operations. Safeway is currently retrofitting the lighting, refrigeration, and HVAC systems of its stores and offices to improve efficiency. For example, the company recently installed “no-heat” doors on its freezers and LED lighting in exterior signage which reduced energy use by 50,000 MWh annually.

In 2007, Safeway worked with the U.S. Green Building Council in the development of the LEED Retail Portfolio Program, a collaboration to design a portfolio approach to efficient LEED building design for the retail sector. Upon certification, Safeway plans to integrate LEED criteria into its standard design and construction practices.

*Renewable Energy* Safeway began its renewable energy program in 2005. The company is currently developing approximately two dozen solar projects across California. When complete the projects should provide approximately 7,500 MWh of solar energy per year, or 20 percent of those stores’ annual electricity use. The company hopes to expand the solar program to supply 40 stores. In addition, Safeway has committed to purchase 90 million kWh of renewable wind energy in 2008. This is enough energy to power 100 percent of Safeway’s more than 300 fuel stations, its corporate facilities and all of its San Francisco and Boulder stores. Safeway is also a member of the EPA Green Power Partnership Program. Each year in partnership with its suppliers, documentation is submitted to substantiate Safeway’s renewable power claims and commitments. Safeway’s purchases of renewable wind energy are audited by the Center for Resources Solutions annually.

*Emissions Trading* Safeway was the first retailer to join the Chicago Climate Exchange. Safeway also was the first retailer to join the California Climate Action Registry and obtain Climate Action Leader Status, that state’s official GHG emission registry.

*Products & Services* None identified.

*Research & Development* None identified.

*Supply Chain Management* In 2007, Safeway initiated the conversion of its entire domestic company-owned distribution truck fleet to biodiesel fuel. Using biodiesel for Safeway’s distribution operations reduces the company’s annual GHG emissions in the U.S. by approximately 75 million pounds. These results are in addition to the company’s commitments through the EPA’s SmartWay Transport Partnership, which conserve more than 6.5 million gallons of diesel fuel annually, reducing approximately 145 million pounds of CO<sub>2</sub> emissions per year.

# WHOLE FOODS MARKET, INC.

NASDAQ – WFMI  
Grocery and Drug Retail

Whole Foods' climate change strategy is focused almost entirely on renewable energy purchases only. The company has purchased 1.2 million MWh hours of wind-based renewable energy credits (serving as carbon offsets for 100 percent of the electricity used in all of its stores), installed solar panels on nine stores, and converted its truck fleet to bio-diesel fuel. However, Whole Foods has not publicly disclosed a greenhouse gas (GHG) emissions inventory or emissions reduction targets.

**Summary Score: 27**

## Company Information

Whole Foods Market owns and operates a chain of natural and organic foods supermarkets. The company operates in the United States, Canada, and the United Kingdom. As of October 2008, Whole Foods operated 275 stores, supported by regional distribution centers, bake house facilities, commissary kitchens, seafood-processing facilities, produce procurement centers, a national meat purchasing office, a confectionary, and a specialty coffee, tea procurement and brewing operation. Whole Foods employed approximately 53,000 employees as of October 2008.

### Contact Information

**Chairman/CEO:** John P. Mackey

**Website:** [www.wholefoodsmarket.com](http://www.wholefoodsmarket.com)

**Address:** 550 Bowie St., Austin, TX 78703, United States

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 11**

*CEO Leadership* None identified.

*Company Strategy* As part of its "Green Mission," Whole Foods strives "to be a leader in environmental stewardship." The company states: "Supporting wise environmental practices is part of our core values and strengthens our commitment to be a leader in environmental stewardship... Wind power, green building and bio-diesel are just a few examples." In addition, according to Whole Foods, "each region and each store continually act on initiatives that support [the] Green Mission." The company also has announced that it is making energy efficiency, on-site renewable energy installation, green building standards, and renewable energy purchasing top priorities in future store planning."

*Executive Responsibility* Whole Foods has established a Green Mission task force, comprised of executives from across the company's regions, including Regional Presidents, General Vice Presidents of Store Development and Construction, Global Vice Presidents of Store Development, Purchasing, Transportation and Logistics, the Global Leaders of Sustainable Engineering, Maintenance and Energy Management, and several members of senior management. In 2008, Whole Foods

# WHOLE FOODS MARKET, INC.

held a Green Mission Congress for regional team leaders to gather and refine the company's environmental strategies and goals.

*External Initiatives* Whole Foods has joined the following initiatives: US EPA Climate Leaders; US EPA ENERGY STAR; US EPA Green Chill; US EPA Green Power Partnership. Whole Foods is also a steering committee member of US DOE's Retail Energy Alliance and is working with DOE in designing a low energy building.

*Employee Training* Whole Foods says that it provides training opportunities for its employees on recycling and climate change issues.

*Executive Compensation* None identified.

## Public Disclosure

Score: 4

*Annual Report* No climate change mention.

*Securities Filings* In the Business Strategy section of its 2007 Form 10-K filing, Whole Foods describes its motto: "Whole Foods, Whole People, Whole Planet." As part of the "Whole Planet" component, the company mentions its renewable energy purchases.

*Other Disclosure* Whole Foods discusses its "Green Mission," which includes energy efficiency initiatives and renewable energy purchases, on its website.

*Sustainability Report* None identified.

*Carbon Disclosure Project* Answered Questionnaire (Not Public)

*Public Policy* Whole Foods says that it has formed "strategic alliances like Clean Air-Cool Planet and retailer alliances to ensure [its] sector is represented during policy discussions around taxation, regulation and carbon trading."

## Emissions Accounting

Score: 1

*GHG Emissions Inventory* Whole Foods has not completed an emissions inventory but plans to do so in the near future.

*Certified CO<sub>2</sub> Offsets* In 2007 Whole Foods purchased 509 million kilowatt hours of wind-based renewable energy credits, offsetting 100 percent of the electricity used in all of its stores, facilities, bake houses, distribution centers, regional offices and national headquarters in the US and Canada.

## Strategic Planning

Score: 11

*Emissions Reduction Targets* Whole Foods has set preliminary emissions reduction targets but has not yet published these targets.

*Target Achievement* None identified.

*Energy Efficiency* Whole Foods has joined as a sector leader for the EPA's National Action Plan for Energy Efficiency. The company is also upgrading its equipment and systems to improve energy efficiency, reducing energy consumption between 10 and 50 percent in certain stores. Whole



## WHOLE FOODS MARKET, INC.

Foods has constructed two stores with LEED Silver certification and currently has 20 stores registered to become LEED certified with more under development. Whole Foods also recently implemented a company-wide energy and refrigerant tracking program.

### *Renewable Energy*

Whole Foods has purchased more than 1.2 million MWh of renewable energy to date. The company has also installed solar panels on five of its stores in California and New Jersey to meet roughly 20 percent of the stores' energy needs. An additional four locations host solar systems on their facilities to support renewable energy markets. In March of this year, the new Glastonbury, Connecticut Whole Foods Market store opened as the first supermarket to generate most of its power on-site with an ultra-clean fuel cell from UTC Power. The store generates 50 percent of the electricity and heat and nearly 100 percent of the hot water needed to operate the store on-site using fuel cell technology.

### *Emissions Trading*

None identified.

### *Products & Services*

None identified.

### *Research & Development*

None identified.

### *Supply Chain Management*

Whole Foods is converting its truck fleet to bio-diesel fuels and retrofitting vehicles with aerodynamic aprons to cut down on wind resistance and therefore lower fuel consumption. Roughly half of Whole Foods' distribution centers use trucks that run on bio-diesel fuel. The company is also partnering with its suppliers and investing in locally manufactured products to help it reduce its carbon footprint.

Whole Foods also heavily promotes local products in its stores. The company says that it is "permanently committed to buying from local producers," and acknowledges that local sourcing helps to reduce the environmental impacts associated with transportation.

# THE KROGER COMPANY

NYSE – KR  
Grocery and Drug Retail

Kroger has centered its climate change initiatives on reducing the company's energy use. Kroger has set a target to reduce its energy use in all stores 30 percent below 2000 levels by 2010, and it has already achieved a 22 percent reduction. Despite these achievements, however, Kroger has not taken the important step of developing a greenhouse gas (GHG) emissions inventory.

**Summary Score: 23**

## Company Information

Kroger operates retail food and drug stores, multi-department stores, jewelry stores, and convenience stores throughout the United States. The company also manufactures and processes some of the food for sale in its supermarkets. As of February 2008, Kroger operated 2,486 supermarkets and multi-department stores, 782 convenience stores and 394 fine jewelry stores. The company also operates 42 manufacturing plants, primarily bakeries and dairies, which supply approximately 43 percent of the corporate brand units sold in the retail outlets. Kroger employs approximately 323,000 full and part-time employees.

### Contact Information

**Chairman/CEO:** David B. Dillon

**Website:** [www.kroger.com](http://www.kroger.com)

**Address:** 1014 Vine St., Cincinnati, OH 45202 United States

## Board Oversight

**Score: 0**

<i>Board Committee/Member</i>	None identified.
<i>Board Role</i>	None identified.
<i>Board Training</i>	None identified.

## Management Execution

**Score: 7**

<i>CEO Leadership</i>	CEO David Dillon discusses Kroger's progress in reducing the company's energy use in his letter in the 2008 sustainability report.
<i>Company Strategy</i>	None identified.
<i>Executive Responsibility</i>	Kroger's Sustainability Committee is comprised of senior leaders from all major departments and functions of the company. In addition, the Executive Committee annually approves the company's energy management plans, including all major energy and emissions reduction capital projects.
<i>External Initiatives</i>	None identified.
<i>Employee Training</i>	Kroger's "Save 5" program educates associates on ways to reduce energy consumption.
<i>Executive Compensation</i>	Kroger states in its CDP6 response: "energy reduction goals are set in advance of each fiscal year and meeting those goals is now a component of the bonus structure for all Store Divisions." It is not clear to which store division personnel this applies.

# THE KROGER COMPANY

## Public Disclosure

Score: 2

<i>Annual Report</i>	No climate change mention.
<i>Securities Filings</i>	Kroger does not discuss climate change in its annual 10-K filing. The company's 2008 proxy statement, however, addresses a shareholder resolution filed with Kroger requesting that it "develop a comprehensive policy for addressing climate change and reducing GHG emissions." The board opposed the resolution, stating that such measures would be "duplicative of current efforts underway" and "would provide little benefit to shareholders beyond what Kroger already has furnished."
<i>Other Disclosure</i>	Kroger discusses its energy efficiency initiatives in the company's 2008 sustainability report.  <b>Sustainability Report:</b> Doing Our Part: 2008 Sustainability Report, June 2008 <b>URL:</b> <a href="http://www.thekrogerco.com/documents/KrogerSustainReport08.pdf">http://www.thekrogerco.com/documents/KrogerSustainReport08.pdf</a> <b>GRI Accordance:</b> None identified.
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	Kroger states in its CDP6 response: "We are constantly assessing risks relating to climate change and other environmental issues, and we regularly prepare for new regulations, extreme weather events, or resource shortages."
<i>Public Policy</i>	None identified.

## Emissions Accounting

Score: 0

<i>GHG Emissions Inventory</i>	None identified. Kroger says that it plans to complete its first GHG emissions inventory this year.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score: 14

### *Emissions Reduction Targets*

	Reduction Targets	Baseline Year	Target Year	Region
<b>Energy Use</b>	<b>30%</b>	<b>2000</b>	<b>2010</b>	<b>All Stores</b>

<i>Target Details</i>	None identified.
<i>Target Achievement</i>	None identified.
<i>Energy Efficiency</i>	Since 2000 Kroger has reduced its overall energy consumption by more than 22 percent. The company has had a "comprehensive energy reduction plan" in place since 2000, and says that it "will continue to implement energy savings and emissions reduction measures into the foreseeable future." Kroger has undertaken several energy efficiency upgrades of its stores, including lighting retrofits, new motors for refrigerators and freezers, and control devices in vending machines.
<i>Renewable Energy</i>	None identified.

## THE KROGER COMPANY

*Emissions Trading* None identified.

*Products and Services* According to the company, Kroger has “many opportunities as a retailer related to climate change.” The company launched a private label for compact fluorescent light bulbs this year and has set a goal to increase sales of CFLs by 25 percent. Kroger also offers E85 ethanol at 44 fuel stations.

*Research & Development* None identified.

*Supply Chain Management* Kroger states in its CDP6 response: “We’re working to reduce the environmental impact of our fleet by reducing the total number of miles our fleet travels, ensuring our equipment operates at peak performance and implementing various fuel-saving measures.” The company has set a goal to reduce fleet mileage by 2 percent (from a 2007 baseline) over a three-year period.

Walgreens has not made public a formal strategy to address the risks and opportunities posed by climate change. There is no evidence of board or executive leadership with respect to climate change, and the company has not developed a greenhouse gas (GHG) emissions inventory or set emissions reduction targets. However, the company has installed solar panel systems on 17 of its stores, and plans to expand this initiative to 45 more stores in 2008. Walgreens has also made energy efficiency upgrades in most of its stores, and has launched several initiatives to reduce the GHG emissions generated by its truck fleet. The company did not comment on this profile by deadline.

**Summary Score: 21**

## Company Information

Walgreen Co., or Walgreens, is the largest drugstore chain (based on sales) in the US. The company operates retail drugstore chains that are engaged in the sale of prescription and non-prescription drugs and general merchandise, including beauty care, personal care, household items, candy, photofinishing, greeting cards, seasonal items and convenience foods. As of August 2007 Walgreens operated 5,997 stores in 48 states and Puerto Rico, and the company anticipates operating up to 7,000 stores by 2010. The company has approximately 226,000 employees.

### Contact Information

**Chairman/CEO:** Jeffrey A. Rein

**Website:** [www.walgreens.com](http://www.walgreens.com)

**Address:** 200 Wilmot Rd., Deerfield, IL 60015 United States

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 5**

*CEO Leadership* In his opening letter to the company's sustainability report, Chairman and CEO Jeff Rein states: "One of the biggest challenges facing all businesses today is finding ways to limit our carbon footprint and reduce greenhouse gasses... Walgreens has many initiatives underway to do just that."

*Company Strategy* In the company's 2008 sustainability report, Walgreens states: "At Walgreens, we are very concerned about how our business impacts the environment and are working to reduce our greenhouse gas emissions and limit our carbon footprint." The company goes on to list several initiatives it has taken to achieve this goal, including reducing emissions associated with the company's fuel fleet and installing solar panels and efficient lighting.

*Executive Responsibility* None identified.

*External Initiatives* The company participates in the following external initiatives: USGBC LEED for Retail Pilot program; USEPA ENERGY STAR.

# WALGREEN COMPANY

*Employee Training* None identified.

*Executive Compensation* None identified.

## Public Disclosure

Score: 4

*Annual Report* Walgreens briefly discusses the company's energy efficiency initiatives in its 2007 Annual Report.

*Securities Filings* No climate change mention.

*Other Disclosure* Walgreens discusses its energy efficiency initiatives in company's 2008 sustainability report.

**Sustainability Report:** *Social Responsibility Report 2008*, April 2008

**URL:** [http://www.walgreens.com/images/pdfs/about/community/social\\_report\\_2008.pdf](http://www.walgreens.com/images/pdfs/about/community/social_report_2008.pdf)

**GRI Accordance:** Not identified.

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* Walgreens notes in its CDP6 response that "an increased number of climate related weather events (hurricanes, etc.) have the potential to disrupt business on a regional level." Because the company "does not engage in manufacturing or other processes that produce an unusual volume of carbon emissions," Walgreens does not anticipate significant regulatory risk.

*Public Policy* None identified.

## Emissions Accounting

Score: 0

*GHG Emissions Inventory* None identified.

*Certified CO<sub>2</sub> Offsets* None identified.

## Strategic Planning

Score: 12

*Emissions Targets* None identified.

*Target Details* None identified.

*Target Achievement* None identified.

*Energy Efficiency* Walgreens participates in the LEED for Retail Pilot program, a collaboration between the US Green Building Council and 80 retail stores to create two new energy efficiency rating systems specific to the retail sector. Through its participation in the US EPA ENERGY STAR program, Walgreens has installed high-efficiency lighting in most stores, lowering energy consumption by 63.4 million kilowatt-hours and saving 109 million tons of CO<sub>2</sub>e. The company has also retrofitted freezer cases with LED lighting and doors to conserve energy. Walgreens plans to debut its first store with an energy efficient "green roof" in Chicago, Illinois this year.



# WALGREEN COMPANY

*Renewable Energy* Walgreens has installed solar panel systems on 17 of its stores and two distribution centers. The installations provide 20 percent of the stores' electricity. The company also plans on adding solar panels to 45 stores and one distribution center in 2008.

*Emissions Trading* None identified.

*Products and Services* In its CDP6 response, Walgreens states: "As consumers become more knowledgeable regarding the effect of GHG emissions, they may embrace services and corporations that are actively working to minimize their carbon footprint and their environmental impact in general." Noting that the "popularity of green products is on the rise," Walgreens has increased its stocks of ENERGY STAR energy efficient light bulbs.

*Research & Development* None identified.

*Supply Chain Management* Walgreens says that it is pursuing bio-fuel engines for its truck fleet in selected markets. In addition, the company's entire fleet of track/trailer semis uses ultra-sulfur diesel or soy-blended fuels, and the fleet includes 150 cars that can run on ethanol blends of gasoline. Walgreens has also increased its fleet's efficiency with converted transmissions, a tire-check program and on-board computers that monitor speed and idle time, and the company prohibits truck idling at distribution centers.

While CVS has taken some measures to improve the energy efficiency of its facilities and reduce the fuel consumption of its distribution fleet, the company has yet to develop and implement a comprehensive climate change strategy. CVS has not developed an emissions inventory or set emissions reduction targets, despite committing to minimize its carbon footprint and make energy efficiency a business priority. The company did not comment on this profile by deadline.

**Summary Score: 12**

## Company Information

CVS is the largest provider of prescriptions and related healthcare services in the United States. The company operates two business segments: Retail Pharmacy and Pharmacy Services. The Retail Pharmacy segment includes 6,245 retail drugstores located in 40 states under the CVS/pharmacy name. The Pharmacy Services segment includes Caremark Pharmacy Services, the pharmacy benefit management, mail order and specialty pharmacy divisions. As of December 29, 2007, the company employed approximately 200,000 associates.

### Contact Information

**Chairman, President, CEO:** Thomas M. Ryan

**Website:** [www.cvs.com](http://www.cvs.com)

**Address:** One CVS Drive, Woonsocket, RI 02895 United States

## Board Oversight

**Score: 0**

<i>Board Committee/Member</i>	None identified.
<i>Board Role</i>	None identified.
<i>Board Training</i>	None identified.

## Management Execution

**Score: 5**

<i>CEO Leadership</i>	None identified.
<i>Company Strategy</i>	In early 2008, CVS adopted an environmental commitment statement. As part of the statement, the company commits to: "minimize our carbon footprint throughout our supply chain and enterprise." CVS has identified "energy management" as a key environmental issue for the company, stating: "As energy costs continue to rise, using energy more efficiently has become a business priority."
<i>Executive Responsibility</i>	In early 2008, CVS launched an Environmental Leadership Council, "charged with developing and implementing the company's environmental strategy as well as establishing short- and long-term priorities." The council will provide progress reports to the CEO and other senior leadership on key initiatives.
<i>External Initiatives</i>	None identified.
<i>Employee Training</i>	CVS educates its facility managers and engineers on energy efficiency.
<i>Executive Compensation</i>	None identified.

# CVS CAREMARK CORP.

## Public Disclosure

Score: 1

<i>Annual Report</i>	No climate change mention.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	CVS discusses its energy management initiatives in its first sustainability report, published in 2008. The company does not provide information about its climate change strategy on its website.  <b>Sustainability Report:</b> 2008 Corporate Social Responsibility Report, May 2008 <b>URL:</b> <a href="http://www.cvscaremark.com/files/CVS_Caremark_CSR.pdf">http://www.cvscaremark.com/files/CVS_Caremark_CSR.pdf</a> <b>GRI Accordance:</b> None identified.
<i>Carbon Disclosure Project</i>	Declined to participate.
<i>Public Policy</i>	None identified.

## Emissions Accounting

Score: 0

<i>GHG Emissions Inventory</i>	None identified.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score: 6

<i>Emissions Reduction Targets</i>	None identified.
<i>Energy Efficiency</i>	CVS has begun to retrofit some of its stores' and distribution centers' lighting systems, installing skylights and efficient lighting controlled by sensors. CVS employees have also participated in LEED training programs, and the company says that it seeks to incorporate LEED standards and ENERGY STAR principles in its design and construction of new stores. The company has also taken steps to reduce energy use at its data centers.
<i>Renewable Energy</i>	None identified.
<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	None identified.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	CVS has implemented several initiatives to lower the fuel consumption of its distribution fleet. In 2007, the company decreased total miles driven by 2.2 percent, despite a rise in the number of products transported. The company is focusing on several programs to continue to reduce the footprint of its distribution activities including: maintaining a fleet of fuel-efficient vehicles, reducing driving speeds, using electric-powered trailers and forklifts, and enforcing a no-idling policy at distribution centers. In 2007, CVS's logistics group consolidated its distribution centers into one location for its core stores in Arizona, Nevada and California, improving the efficiency of its distribution system in the region. CVS also invested in new transportation routing software at all of its distribution centers to improve its process for loading and routing deliveries to stores.

L'Oréal has placed CEO John-Paul Agon at the head of the company's climate change efforts, which are coordinated by both an Executive Committee for Sustainable Development and a Sustainable Development Steering Committee. The company has made significant strides in reducing the energy use and greenhouse gas (GHG) emissions from its own operations, setting energy and emissions reduction targets annually and surpassing these goals. In addition, L'Oréal has participated in international efforts to promote GHG reduction; in 2007 the company signed the Bali Communiqué, calling for a comprehensive, legally binding United Nations framework to tackle climate change.

**Summary Score: 54**

## Company Information

L'Oréal is a cosmetics company based in France. The company markets 25 global cosmetics brands for different product ranges: Consumer Products; Professional Products; Luxury Products; and Active Cosmetic Products. In 2006, L'Oréal acquired the Body Shop, a UK-based cosmetics company. L'Oréal has 63,358 employees in 58 countries and 40 factories around the world.

### Contact Information

**Chairman:** Sir Lindsay Owen-Jones

**CEO:** Jean-Paul Agon

**Website:** [www.loreal.com](http://www.loreal.com)

**Address:** 41, rue Martre Centre Eugene Schuelle, Clichy, 92117 France

## Board Oversight

**Score: 3**

<i>Board Committee/Member</i>	Jean-Paul Agon, CEO and member of the board of directors.
<i>Board Role</i>	L'Oréal's Board of Directors is responsible for approving and monitoring the company's sustainability strategy.
<i>Board Training</i>	None identified.

## Management Execution

**Score: 15**

<i>CEO Leadership</i>	L'Oréal's CEO, Jean-Paul Agon, chairs the company's Executive Sustainable Development Committee. In the "Chairman and CEO Message" section of the company's 2007 sustainability report, Sir Owen-Jones and Mr. Agon discuss the company's climate change initiatives and outline its GHG emissions reduction goal.
<i>Company Strategy</i>	L'Oréal states in its 2007 sustainability report: "L'Oréal is committed to reducing our impact on climate change. This includes reducing our Scope 1 direct emissions, Scope 2 indirect emissions and our Scope 3 supply chain emissions. Our focus has been on reducing Scope 1 and 2 emissions over the last several years. We have also initiated work on raw materials, packaging, travel, transportation and product use and disposal."

<i>Executive Responsibility</i>	L'Oréal's sustainability committees are responsible for the company's climate change strategy and initiatives. L'Oréal's progress on sustainability is driven by a Sustainable Development Steering Committee made up of managers from the different divisions of the company. The committee is chaired by Pierre Simoncelli, the Director of Sustainable Development. This Steering Committee reports to the Executive Committee for Sustainable Development, made up of the five functional Executive Vice-Presidents, the Senior Vice-President in charge of External Relations and Public Affairs and the Director of Ethics, and chaired by the Chief Executive Officer, Jean-Paul Agon. This Executive Committee is responsible for overall sustainability strategy and implementation.
<i>External Initiatives</i>	L'Oréal signed the Bali Communiqué in 2007, calling for a comprehensive, legally binding United Nations framework to tackle climate change. The company is also a member of the Carbon Disclosure Project's Supply Chain Leadership Collaboration program and the Global Business Leadership Platform on Climate Change of the United Nations Global Compact.
<i>Employee Training</i>	L'Oréal has set a group-wide goal to reduce employee travel by 20 percent in 2008 by encouraging employees to use alternative forms of transportation and using video and telephone conferencing whenever possible.
<i>Executive Compensation</i>	None identified.

## Public Disclosure

Score: 9

<i>Annual Report</i>	In the "Social and Environmental Responsibility" section of L'Oréal's 2007 Annual Report, the company highlights its participation in the Global Business Leadership Platform on Climate Change of the United Nations Global Compact. L'Oréal also discusses several climate-related key performance indicators in other sections of the report, including its reduction in energy use and implementation of renewable energy projects.
<i>Securities Filings</i>	L'Oréal does not file a Form 10-K or 20-F with the US Securities and Exchange Commission.
<i>Other Disclosure</i>	L'Oréal discusses its climate change initiatives in detail in its annual sustainability report, located on the company's website.  <b>Sustainability report:</b> 2007 Sustainable Development Report, June 2008 <b>URL:</b> <a href="http://www.loreal.com/_en/_ww//pdf/LOREAL_RDD_2007.pdf">http://www.loreal.com/_en/_ww//pdf/LOREAL_RDD_2007.pdf</a> <b>GRI Accordance:</b> G3 Draft
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	While L'Oréal says it does not face "significant regulatory risks at the present time," the company does acknowledge it could be "impacted by future regulations governing energy use."
<i>Public Policy</i>	As mentioned above, L'Oréal signed the Bali Communiqué calling for a comprehensive, legally binding United Nations framework to tackle climate change.

## Emissions Accounting

Score: 11

GHG Emissions Inventory    Year: 2007    Facility/Region: Operational Control    Protocol: Other

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	82,582
Scope 2 (Indirect –Electricity)	135,598
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

*Accounting Methods*    L'Oréal's inventory does not include The Body Shop, Sanoflore, and other acquisitions made in late 2006 or in 2007. Emissions calculations are performed by ERM and are based on the methodology of the GHG Protocol.

*External Verification*    L'Oréal's GHG emissions inventory has been verified by ERM.

*Certified CO<sub>2</sub> Offsets*    None identified.

## Strategic Planning

Score: 16

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Absolute)	2%	2007	2008	Global
Energy Use	5% per unit of production	2007	2008	Factories and distribution centers

*Target Details*    Most of L'Oréal's targets are set year to year.

*Target Achievement*    L'Oréal exceeded its 2007 energy reduction goal of a 2 percent reduction below 2005 levels per unit of finished product, achieving a 9.6 percent reduction between 2005 and 2007. The company also set the same target for its Scope 1 CO<sub>2</sub> emissions, achieving a 5.5 percent reduction. In addition, L'Oréal reduced its Scope 1 and 2 CO<sub>2</sub> emissions by 5 percent between 2005 and 2007.

*Energy Efficiency*    L'Oréal established a new Sustainable Buildings Policy in 2007 which applies to all owned or operated L'Oréal facilities worldwide. The policy requires all new major construction and significant renovation projects to meet LEED standards or equivalent local certifications. In addition, L'Oréal has established a policy to use natural gas over oil/diesel when available to reduce the company's GHG emissions. In locations where natural gas is not available, the company uses the lowest sulfur-containing fuel available.



<i>Renewable Energy</i>	L'Oréal estimates that approximately 15.5 percent of its electricity is purchased from renewable sources. The company has several on-site renewable energy projects underway; L'Oréal recently constructed a new bio-methane supplied cogeneration plant and it hopes to shift from corn-based fuel to agricultural waste by 2010. Other projects include a solar water heating system in a factory in Pune, India and solar panels on an administration building in Karlsruhe, Germany. The company also says that it expects to launch a number of new renewable energy projects in 2008.
<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	L'Oréal notes that it could “see some increased sales in cosmetics due to warming trends” – particularly for products such as sunscreen and “no-run” cosmetics.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	L'Oréal has identified logistics as a significant source of the company's GHG emissions, stating: “Transport of our products to our distribution centres and to our customers is a major contributor of GHGs.” Although L'Oréal relies on contracted services for its distribution and transportation, the company's Supply Chain Organization is responsible for working with these external firms to “reduce the distances products travel” in an effort to lower Scope 3 emissions. As part of this effort, the company has enhanced its data collection system.

# COLGATE-PALMOLIVE COMPANY

NYSE – CL  
Personal and Household Goods

Colgate has identified on-site fuel combustion and externally purchased electricity as the most significant sources of greenhouse gas (GHG) emissions for the company, and has focused its climate change strategy on improving the energy efficiency of its operations. The company has established a Global Energy Reduction Team to identify opportunities for energy conservation at each of its facilities. In addition, after achieving its initial energy efficiency target, Colgate set a new goal to reduce its energy consumption.

**Summary Score: 52**

## Company Information

Colgate-Palmolive Company is a consumer products company with products marketed in more than 200 countries throughout the world. The company manages its business in two product segments: Oral, Personal and Home Care; and Pet Nutrition. As of December 31, 2007, Colgate operated in 80 countries and employed approximately 36,000 employees.

### Contact Information

**Chairman:** Reuben Mark

**CEO:** Ian M. Cook

**Website:** [www.colgate.com](http://www.colgate.com)

**Address:** 300 Park Avenue New York, NY 10022 United States

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 13**

*CEO Leadership* Chairman Reuben Mark and CEO Ian Cook mention the company's LEED certified manufacturing facility in their letter to shareholders in the company's 2007 Annual Report.

*Company Strategy* Colgate states on its website: "At Colgate, we understand the potentially negative consequences of climate change and are committed to acting responsibly and conscientiously to protect people and the environment everywhere we operate. We understand how climate change may impact our business, including access to raw materials (e.g., agricultural products and clean water) for use in our oral care, personal care, home care and pet nutrition products." Colgate also states: "The objective of our plan is to continuously improve our enterprise-wide energy and climate change performance. The basic elements of our strategy include increasing energy efficiency, reducing our carbon footprint, strategically investing in energy and climate change improvements, and communicating our performance."

*Executive Responsibility* The Colgate Global Sustainability Steering Committee has overall responsibility for directing and implementing Colgate's climate change strategy. The committee is led by the Vice President, Global Social Responsibility and Executive Vice President, Latin America & President, Global Sustainability. Its members include a number of the company's senior management from across the company's different business lines, and the Vice President,

# COLGATE-PALMOLIVE COMPANY

Global Social Responsibility reports directly to Colgate's President and Chief Executive Officer. The Worldwide Director of Environmental, Occupational Health & Safety provides periodic presentations and updates to the Global Sustainability Steering Committee on Colgate's climate change strategy and progress. In addition, as a way to encourage energy efficiency throughout the company, Colgate has created a Global Energy Reduction Team comprised of internal energy and environmental experts.

*External Initiatives* The company has joined the following external initiatives: USEPA ENERGY STAR; CDP Supply Chain Leadership Collaboration.

*Employee Training* Colgate's Energy Reduction Team created a "CP Energy Reduction Guidebook," which it distributed to all manufacturing and research facilities around the world to help employees identify energy-saving opportunities. The team has also developed a complementary website and an energy reduction e-training program. This tool has been launched at all Colgate facilities worldwide.

*Executive Compensation* Colgate's manufacturing leadership team and Environmental, Occupational Health and Safety staff have goals relating to energy reduction for manufacturing sites. These goals are included in Colgate's annual individual assessment process and performance evaluation and are factors in determining annual incentive compensation.

## Public Disclosure

Score: 7

*Annual Report* Colgate briefly discusses its energy efficiency initiatives in the company's 2007 annual report.

*Securities Filings* No climate change mention.

*Other Disclosure* Colgate provides detailed information on its climate change strategy and initiatives on the company's website, which also serves as its sustainability report.

**Sustainability report:** *Sustainability. Living Our Values*, May 2008

**URL:** <http://www.colgate.com/app/Colgate/US/Corp/LivingOurValues/Sustainability/>

**GRI Accordance:** G3 Draft

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* Because the company "uses a relatively small amount of energy" in its operations, Colgate "does not expect to be significantly affected by emissions regulations, carbon taxation, statutory emissions limits and mandatory trading programs." However, citing the climate change effects described in the 2007 IPCC report, *Summary for Policymakers, Climate Change 2007*, Colgate identifies several climate-related physical risks facing the company. The company notes that several of its manufacturing sites may be in coastal areas prone to increased flooding. In addition, climatic shifts may interrupt the company's "steady supply of raw materials, such as agricultural products for pet food products and fragrances and flavors for consumer products."

*Public Policy* Colgate says that it "engages with policymakers on possible responses to climate change via various trade associations."

# COLGATE-PALMOLIVE COMPANY

## Emissions Accounting

Score: 13

GHG Emissions Inventory Year: 2007 Facility/Region: Global manufacturing and research facilities Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	244,380
Scope 2 (Indirect –Electricity)	430,696
Scope 3	—
Travel	23,000
Logistics	—
Products	—
Supply Chain	—

**Accounting Methods** The company's current emissions inventory was developed using the GHG Protocol for Scope 1, Scope 2, and travel-related emissions from global manufacturing and research facilities. In early 2008 Colgate initiated energy data collection systems for use at its office and warehouse facilities, which will allow the company to estimate emissions from those operations in the future. Additionally, the company is working with its automotive fleet vendors to assist in the collection of CO<sub>2</sub> data associated with its leased cars and trucks. Colgate plans to report on these additional Scope 1 & 2 emissions in future reports.

**External Verification** Colgate's emissions inventory has been verified by Quantum Management Group, an external environmental consulting company.

**Certified CO<sub>2</sub> Offsets** None identified.

## Strategic Planning

Score: 19

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Absolute)	5%	2002	2010	Global
GHG Emissions (Intensity)	25% per ton of production	2002	2010	Global
Energy Use	5%	2002	2010	Global
Energy Use	25% per unit production	2002	2010	Global

**Target Details** Colgate has set both absolute and intensity targets for its GHG emissions and energy use.

**Target Achievement** Colgate achieved its first target to reduce energy consumption per ton of production by 15 percent below 1998 levels. By 2007, the company had improved energy efficiency by 28 percent. Colgate has also reduced its carbon dioxide emissions per ton of product by approximately 14 percent from 2002 to 2007.

# COLGATE-PALMOLIVE COMPANY

*Emissions Trading* Colgate does not currently participate in emissions trading but says it “will continue assessing developments in carbon trading markets and regulatory approaches addressing trading.”

*Energy Efficiency* Colgate notes on its website: “While Colgate is not an energy-intensive company, carbon dioxide (CO<sub>2</sub>) created from on-site fuel combustion and externally purchased electricity is the most significant greenhouse gas emission associated with manufacturing our products.” For this reason, Colgate has focused its climate change efforts “over the past ten years primarily on energy efficiency improvements.” The company is “working strategically to maximize investments in climate-friendly technologies, to design new facilities according to US Green Building Council criteria and to improve manufacturing processes...[and] build new facilities with a particular focus on energy efficiency and climate change.” The company has created a Global Energy Reduction Team comprised of internal energy and environmental experts charged with identifying and communicating new ideas and best practices for energy-saving opportunities. Since 2003, most of Colgate’s largest sites have participated in comprehensive third-party energy surveys to identify energy savings projects at the facility. In 2007, the company reduced its energy consumption per ton of production by roughly 18 percent compared to 2002 levels. Since 1998 Colgate has improved energy efficiency by approximately 28 percent. Colgate has also agreed to extend the payback horizon for emission/energy reduction projects compared to its regular Capital Expenditure projects to allow more flexibility in achieving its emission and energy reduction longer term goals.

Colgate has registered its new manufacturing sites, currently in construction in China, Vietnam, The Czech Republic, the US and Thailand, for LEED Certification with the US Green Building Council. Colgate’s manufacturing facility in Morristown, Tennessee achieved a Silver LEED certification in 2008. The company also initiated several other energy efficiency projects in 2007, including the installation of a cogeneration unit at a New Jersey facility.

*Renewable Energy* None identified.

*Products & Services* Colgate notes in its CDP6 response that “there may be an opportunity for developing new products designed to address one or more aspects of climate change.” The company is currently developing new products “with various attributes to address multiple sustainability issues including energy, material use and packaging.” Colgate uses its semi-annual business and financial review process “to assess potential opportunities...to optimize new products, leverage new technologies and/or institute new processes associated with climate change opportunities.”

*Research & Development* None identified.

*Supply Chain Management* Colgate is a member of the CDP Supply Chain Leadership Collaboration. The company has also partnered with Wal-Mart to work together to reduce supply chain-associated GHG emissions.

Ecolab has cut its energy usage per ton of production by 50 percent since 2005. The company's board of directors is responsible for oversight of The Ecolab Environment Principles, which include several climate-change related commitments. Ecolab has set a greenhouse gas (GHG) emissions intensity target, and the company currently markets a number of energy efficient products with a focus on reducing customers' energy consumption.

**Summary Score: 45**

## Company Information

Ecolab develops and markets products and services for the hospitality, foodservice, healthcare and industrial markets. The company provides cleaning and sanitizing products and programs, as well as pest elimination, maintenance and repair services primarily to hotels and restaurants, healthcare, educational and other facilities. The company operates in three business segments: United States Cleaning & Sanitizing segment, United States Other Services segment and International segment. Ecolab operates in more than 70 countries around the world and has more than 26,000 employees.

### Contact Information

**Chairman/CEO:** Douglas M. Baker Jr.

**Website:** [www.ecolab.com](http://www.ecolab.com)

**Address:** 370 Wabasha St. N, St. Paul, MN 55102 United States

## Board Oversight

**Score: 8**

### Board Committee/Member

Jerry W. Levin, Chair of Governance Committee and Presiding Director

### Board Role

According to the committee's charter, the Governance Committee has the responsibility to "receive reports from management with regard to relevant social responsibility issues and report to the Board as appropriate," as well as "review and recommend to the Board with respect to the Corporation's environmental and sustainability practices and performance, including compliance with The Ecolab Environmental Principles." The Ecolab Environmental Principles include several climate change-related commitments. Ecolab's board of directors is updated periodically on the company's climate change initiatives.

### Board Training

None identified.

## Management Execution

**Score: 11**

### CEO Leadership

CEO Douglas Baker discusses the company's progress in reducing energy consumption and setting GHG emissions targets in his letter to shareholders in the 2007 Annual Report. Mr. Baker also discusses the company's climate change initiatives in his opening message for the company's 2007 sustainability report.

### Company Strategy

Ecolab has published a set of six Environmental Principles. The company states: "Through continuous improvement and sustainable innovation, Ecolab creates solutions that maximize product and environmental performance. We make sound decisions based on good science, and are committed to reducing our carbon footprint and overall impact on the environment." Ecolab's principles directly address climate change in several areas, including its commitments



to: a) develop products and services that minimize customers' water and energy use; b) use environmentally responsible and sustainable resources, and invest in improving energy efficiency; c) minimize emissions, effluents and waste from operations, and dispose of all wastes safely and responsibly; and d) review the environmental attributes of raw materials and make environmental sustainability a key requirement in selection of product formulations.

<i>Executive Responsibility</i>	Ecolab's Environmental, Health, Safety, and Transportation team is responsible for the company's climate change initiatives. The team, which meets quarterly, is comprised of senior management and divisional heads.
<i>External Initiatives</i>	Ecolab is a member of the US EPA Climate Leaders program.
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	Each of Ecolab's plant managers has specific objectives relating to energy usage, water usage, and waste generation that are linked to the employee's compensation.

## Public Disclosure

**Score: 10**

<i>Annual Report</i>	Ecolab's 2007 Annual Report outlines the company's "commitment to sustainability" and describes progress in reducing energy use and GHG emissions. The report also highlights new energy efficient products marketed by the company.
<i>Securities Filings</i>	In the "Environmental and Regulatory Considerations" section of the company's Form 10-K filing, Ecolab states: "Various laws and regulations pertaining to climate change have been implemented or are being considered for implementation at the international, national, regional and state levels, particularly as they relate to the reduction of greenhouse gas (GHG) emissions. None of these laws and regulations directly applies to Ecolab at the present time, however, as a matter of corporate policy, Ecolab supports a balanced approach to reducing GHG emissions while sustaining economic growth and competitiveness. Ecolab has joined U.S. EPA's Climate Leaders program, and as part of that program we have pledged to develop a corporate-wide U.S. GHG emission inventory and work with EPA to set a GHG reduction goal in 2008."
<i>Other Disclosure</i>	Ecolab provides information on its climate change initiatives in its sustainability report, which is available on the company's website.  <b>Sustainability report:</b> <i>Think Green, Go Blue.</i> Sustainability Report, March 2008 <b>URL:</b> <a href="http://www.ecolab.com/Publications/SustainabilityReport/SustainabilityReport2007.pdf">http://www.ecolab.com/Publications/SustainabilityReport/SustainabilityReport2007.pdf</a> <b>GRI Accordance:</b> G3 Draft
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	Ecolab notes in its CDP6 response that "regulatory changes are likely to increase the cost of doing business." In addition, the company says that "extreme weather could give rise to flood or drought conditions that might threaten interruption of vulnerable facilities or supply of certain raw materials."

*Public Policy* Ecolab states in its response to the CDP6 survey: “We believe climate change policy represents opportunities for us to respond proactively to government and other stakeholder’s requirements/expectations.”

## Emissions Accounting

Score: 10

*GHG Emissions Inventory* Year: 2007 Facility/Region: US only\* Protocol: Other

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Total Emissions	—
Scope 1 (Direct)	20,012**
Scope 2 (Indirect –Electricity)	56,200
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

\* 53% of revenue

\*\* Defined by company as “stationary combustion”

*Accounting Methods* Ecolab reports emissions data for its US operations only; however, the company estimates that global emissions can be estimated by doubling US data.

*External Verification* Ecolab’s emissions inventory is audited by the US EPA as part of the Climate Leaders program.

*Certified CO<sub>2</sub> Offsets* None identified.

## Strategic Planning

Score: 6

*Emissions Reduction Targets*

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Intensity)</b>	<b>15% CO<sub>2</sub>e per ton production</b>	<b>2007</b>	<b>2012</b>	<b>US only</b>

*Target Details* None identified.

*Target Achievement* Ecolab has cut its energy usage per ton of production by 50 percent since 2005.

*Energy Efficiency* Ecolab says that it “continuously strives” to improve the energy efficiency of its manufacturing facilities, its vehicle fleet, and its office/research facilities.

*Renewable Energy* None identified.

*Emissions Trading* None identified.

*Products & Services* Ecolab has identified its products as the most significant area of impact in addressing climate change. The company states: “While we strive to minimize our contribution to climate

change, our biggest impact is in providing products and services to help our customers reduce their carbon footprints...From concentrated, solid formulations to innovative packaging and dispensing methods, our products help increase safety, lower use of water and energy, and reduce chemicals and waste released into the environment. Because at Ecolab, we are committed to sustainability in our own operations — but we realize that the greatest contribution we can make to the environment reaches beyond that.”

Ecolab currently markets a number of energy efficient products with a focus on reducing customers’ energy consumption. For example, Ecolab’s Formula 1 laundry program was designed to help hotel chains reduce hot water usage by 25 percent and laundry cycle times by 12 to 18 minutes, resulting in significant energy savings. The Energy Optimiser and Aquamiser products for commercial laundries use hot water discharged from washing machines to preheat water for rinse cycles and new washes, saving energy by up to 45 percent on continuous batch washers. The company’s Lime-A-Way products control lime scale buildup on heating elements in commercial kitchens, reducing energy consumption by as much as 40 percent. In addition, in 2007 Ecolab entered into a strategic partnership with Site Controls, LLC, a leading provider of energy management and business intelligence solutions, to provide energy management solutions to Ecolab customers. The Total Enterprise Control Energy Management System remotely monitors and controls heating, ventilation and air conditioning, lighting, and signage to reduce customers’ energy usage by up to 10 to 20 percent. Furthermore, in February 2008, the company acquired Ecovation, Inc., a provider of renewable energy solutions and effluent management systems primarily for the food and beverage manufacturing industry in the U.S., including dairy, beverage, and meat and poultry producers.

Ecolab also notes that the climate change effects may present opportunities for the company to further expand certain business units. For example, the company states: “Certain of our business units, such as our Pest Elimination Division, may find increasing opportunities as the climate heats up because of more temperatate conditions conducive to pest growth.”

*Research & Development*

Ecolab has modified the phase-gate process for research and development expenditures and new product/service development to require sustainability emphasis at each stage.

*Supply Chain Management*

None identified.

# PROCTER & GAMBLE COMPANY

NYSE – PG  
Personal and Household Goods

Procter and Gamble's climate change strategy is addressed at the both the board and senior executive level. The Governance and Public Responsibility Committee of Procter and Gamble's board of directors oversees the company's climate change strategy. The Global Sustainability Department, comprised of senior P&G managers from across the company, is responsible for reviewing progress on the company's climate change initiatives and reporting directly to the board of directors. As part of its strategy, P&G has set both a greenhouse gas (GHG) emissions intensity reduction target and an energy use reduction target. The company was also a founding member of the CDP Corporate Supply Chain Program, and has set a goal to generate at least \$20 billion by 2012 in cumulative sales of "sustainable innovation products," or products with a significantly reduced (>10 percent) environmental footprint versus previous or alternative products.

**Summary Score: 42**

## Company Information

Procter and Gamble is the world's largest maker of household products. The company's products are sold in over 180 countries around the world and include billion-dollar brands such as Always, Olay, Pantene, Dawn, Crest, Oral-B, Downy, Gain, Tide, Bounty, Charmin, Pampers, Folgers, Iams, Pringles, Gillette, and Duracell. Procter and Gamble is organized into three Global Business Units: Beauty; Health & Well-Being; and Household Care. The company operates more than 140 manufacturing facilities in 40 countries and has approximately 138,000 employees.

### Contact Information

**Chairman/CEO:** Alan G. Lafley

**Website:** [www.pg.com](http://www.pg.com)

**Address:** One Procter and Gamble Plaza, Cincinnati, OH 45202 United States

## Board Oversight

**Score: 7**

### Board Committee/Member

Governance and Public Responsibility Committee, chaired by Margaret C. Whitman

### Board Role

The Governance and Public Responsibility Committee has responsibility for oversight of climate change issues. The committee receives regular reports from the Sustainability Council.

### Board Training

None identified.

## Management Execution

**Score: 10**

### CEO Leadership

None identified.

### Company Strategy

Procter & Gamble states: "P&G believes that there is growing scientific evidence linking greenhouse gas emissions and global climate change. As a global citizen, P&G is concerned about the potentially negative consequences of climate change and believes prudent and cost-effective action by governments, industry and citizens to reduce emissions to the atmosphere are justified."

P&G is focusing its climate change efforts in two main areas. First, the company is working to reduce the GHG emissions intensity of its own operations through energy efficiency measures, use of lower-carbon fuels, and goal-setting to drive continued improvement. Second, the company has launched initiatives to help consumers to reduce their own GHG emissions.

# PROCTER & GAMBLE COMPANY

<i>Executive Responsibility</i>	The Global Sustainability Department, comprised of senior P&G managers from across the company, is responsible for reviewing progress on the company's climate change initiatives. Dr. Peter White, Director Global Sustainability, chairs the department, which reports directly to the board of directors.
<i>External Initiatives</i>	P&G is a member of the CDP Corporate Supply Chain Program.
<i>Employee Training</i>	P&G provides training on eco-efficiency and climate change issues for employees in certain sectors of the company's business, including Product Supply and Research and Development.
<i>Executive Compensation</i>	<p>In P&amp;G's 2008 proxy report, the Compensation and Leadership Development Committee reported that it considered "external recognition of Mr. Lafley and the Company's leadership" in determining Mr. Lafley's compensation, including the company's "top ranking in the Dow Jones Sustainability Index." In the Executive Compensation section of the company's 2007 sustainability report P&amp;G states:</p> <p>Additionally, we expect executives to uphold the fundamental principles in the Company's Statement of Purpose, Values and Principles, plus the Worldwide Business Conduct Manual, the Sustainability Report, and the Environmental Quality Policy. These principles include integrity, maximizing the development of each individual, developing a diverse organization, and continually improving the environmental quality of the Company's products and operations. "</p>

## Public Disclosure

Score: 5

<i>Annual Report</i>	P&G states in its 2007 annual report: "At P&G, sustainability is embedded into both our business strategy and our holistic view of innovation." The company describes examples of innovative measures it has taken to reduce the CO <sub>2</sub> emissions associated with its operations and products.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	<p>P&amp;G discusses its initiatives to reduce emissions from its operations and products in the company's 2007 Global Sustainability Report. The company will release its 2008 report on its website in November 2008.</p> <p><b>Sustainability report:</b> <i>Designed to Grow...Sustainably</i>, November 2007  <b>URL:</b> <a href="http://www.pg.com/company/our_commitment/pdfs/gsr07_Web.pdf">http://www.pg.com/company/our_commitment/pdfs/gsr07_Web.pdf</a>  <b>GRI Accordance:</b> G3 Draft</p>
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	Procter and Gamble does not identify specific climate-related regulatory, physical or other risks in its CDP6 response. The company notes its exposure to "general risks through consumer habit," but does not elaborate on these risks.
<i>Public Policy</i>	Procter and Gamble states: "We directly monitor local and regional developments in taxation, regulation and carbon trading; and also work with industry associations to provide input from a business point of view during the consultation phases of policy development."

# PROCTER & GAMBLE COMPANY

## Emissions Accounting

Score: 7

GHG Emissions Inventory    Year: FY2006    Facility/Region: Manufacturing sites only    Protocol: Other

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	2,970,000
Scope 2 (Indirect –Electricity)	3,377,000
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

*Accounting Methods*    Scope 1 GHG emissions include CO<sub>2</sub> from fuel combustion sources from all of the company's manufacturing sites globally. USEPA emission factors (AP-42) were used to convert fuel usage to CO<sub>2</sub> emissions. For scope 2, emissions were calculated from P&G's off-site generated electricity usage using the USEPA eGRID 2002 methodology

*External Verification*    None identified.

*Certified CO<sub>2</sub> Offsets*    None identified.

## Strategic Planning

Score: 13

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Intensity)	40% per unit production	2002	2012	
Energy Use	Global	2006	2012	Global

*Target Details*    None identified.

*Target Achievement*    P&G's 2007 emissions were less than its 2002 emissions, despite an increase in global sales from \$40 billion to \$77 billion and the acquisitions of Wella and Gillette.

*Emissions Trading*    P&G has commissioned a team specifically to "manage the interaction of the various emissions trading schemes with P&G's businesses." This multidisciplinary team includes members from manufacturing, corporate Health, Safety, and Environment, purchasing and corporate sustainability.

*Energy Efficiency*    In 2007 P&G developed a pilot "Big Box" distribution center in Amiens, France which included: natural light via translucent roof panels (energy savings up to 30 percent); energy-efficient fluorescent lighting, daylight dimming and motion detection (energy savings up to 70 percent), and; forklift trucks with AC regenerative motors (energy savings up to 30 percent).



# PROCTER & GAMBLE COMPANY

In Asia, five beauty plants have pooled resources to create a regional engineering team to reduce energy consumption. Although production volume has grown significantly in all five plants, the energy saving program in fiscal year 2006-2007 led to a reduction of about 9.5 million kg of CO<sub>2</sub> emissions.

## *Renewable Energy*

P&G's pilot "Big Box" distribution center in Amiens, France also includes solar panels for hot water supply and photovoltaic cells for energy production, as well as windmill turbines to produce up to 10 percent of the energy needed on site.

## *Products & Services*

P&G has set a goal to generate at least \$20 billion by 2012 in cumulative sales of "sustainable innovation products," or products with a significantly reduced (>10 percent) environmental footprint versus previous or alternative products. The company states: "As a consumer goods company we have the great opportunity to interact directly with the consumer. We can provide products that meet the consumers' needs and enable the consumer to directly influence their own household impact through delivering sustainable innovation and consumer education."

In 2007 P&G launched two campaigns in Italy to promote use of detergents made for lower water temperatures. The company launched two new detergent products designed for cold water laundry and educated consumers through the "Turn to 30°C" campaign to wash at lower temperatures to save energy. P&G also formed an alliance with Enel, Italy's largest power company, to distribute 3.7 million energy efficient light bulbs to Italian consumers.

Also this year, P&G's Braun electric shavers became the world's first shaver brand to receive ENERGY STAR qualification for its battery chargers. Braun shaving systems feature "Smart Plugs" that use 64 percent less energy than standard shavers.

## *Research & Development*

P&G spends more than \$1.8 billion annually in research and development, some of which is focused on reducing the environmental impacts of the company's products.

## *Supply Chain Management*

Procter & Gamble is one of the founding members of CDP's Supply Chain Leadership Council.

# AVON PRODUCTS, INC.

NYSE – AVP  
Personal and Household Goods

Avon has taken several important steps in implementing its climate change strategy. The company has developed a greenhouse gas (GHG) emissions inventory, set energy efficiency and emissions intensity targets, and begun to initiate energy efficiency measures in its buildings.

**Summary Score: 27**

## Company Information

Avon Products is a global manufacturer and marketer of beauty and related products. The company's products fall into three product categories: Beauty, which consists of cosmetics, fragrances, skin care and toiletries; Beauty Plus, which consists of fashion jewelry, watches, apparel and accessories; and Beyond Beauty, which consists of home products and gift and decorative products. Avon has sales operations in 66 countries and territories and distributes its products in 48 more. The company primarily sells its products through the direct-selling channel, rather than third party retail establishments. At December 31, 2007, Avon employed approximately 42,000 employees.

### Contact Information

**Chairman/CEO:** Andrea Jung

**Website:** [www.avoncompany.com](http://www.avoncompany.com)

**Address:** 1345 Avenue of the Americas, New York, NY 10105 United States

## Board Oversight

**Score: 1**

*Board Committee/Member* In July 2008 Avon Chairman and CEO Andrea Jung launched the Chairman's Environmental Task Force (see next section).

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 6**

*CEO Leadership* In July 2008 Avon Chairman and CEO Andrea Jung launched the Chairman's Environmental Task Force. The goal of the Task Force is to "find new and creative ways to address the imperative of environmental stewardship and to further engage our associates on environmental issues."

*Company Strategy* Avon has published an environmental policy on its website, which states: "We have a responsibility to ensure that our business practices are environmentally sound and that our products are safe and effective for their intended use." While Avon's environmental policy does not directly address climate change issues, the company says that it has been "focused on reducing greenhouse gas emissions since the mid-1990s."

*Executive Responsibility* Avon's Global Supply Chain Council (GSCC), comprised of senior operations executives, is the most senior body in charge of environmental affairs (including climate change) at the company. The Senior Manager, Global Environmental Affairs, directs the overall environmental program, and provides technical support and guidance to senior management, and regional and local environmental staff. A local environmental designee at each Avon facility implements the specific environmental activities and processes at the operating site

# AVON PRODUCTS, INC.

level. Environmental designees report regularly to the Senior Manager, Global Environmental Affairs.

*External Initiatives* None identified.

*Employee Training* In early 2008 Avon launched “Hello Green Tomorrow,” a new employee engagement initiative in environmental stewardship. The program is being adopted and rolled out around the world, engaging associates in generating and implementing environmental programs in their facilities worldwide.

*Executive Compensation* None identified.

---

## Public Disclosure

**Score: 4**

*Annual Report* No climate change mention.

*Securities Filings* In Item 1A (“Risk Factors”) of the company’s Form 10-K filing, Avon states: “Sudden disruptions in business conditions...[including] adverse weather conditions and climate changes or other natural disasters, such as Hurricane Katrina, pandemic situations or large scale power outages can have a short or, sometimes, long-term impact on consumer spending.”

*Other Disclosure* Avon briefly discusses its energy efficiency initiatives and GHG reduction strategies on its website and in the company’s 2005 annual report. The company has not released a new sustainability report since 2005. A new Corporate Responsibility website is in development for late 2008.

**Sustainability report:** *Corporate Responsibility Report*, September 2005

**URL:** <http://www.avoncompany.com/responsibility/index.html>

**GRI Accordance:** None identified.

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* In its CDP6 response Avon identifies several climate-related physical risks relevant to the company’s business. Avon “depends on a steady supply of raw materials, components and finished goods”; and, as the company notes, “a substantial change in weather patterns could have potential impact on the availability or even transportation and delivery of materials or finished goods.” The company also states: “Aside from physical risks, we understand the value consumers place on companies acting as responsible corporate citizens.”

*Public Policy* None identified.

---

# AVON PRODUCTS, INC.

## Emissions Accounting

Score: 7

GHG Emissions Inventory

Year: 2007

Facility/Region: Global manufacturing operations

Protocol: Other

Emissions	CO <sub>2</sub> e (Metric Tonnes)
<b>Total Emissions</b>	<b>118,204</b>
Scope 1 (Direct)	—
Scope 2 (Indirect –Electricity)	—
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

Accounting Methods

Avon contracted an environmental consultant specializing in GHG inventory development to compile the GHG emissions data.

External Verification

While Avon's emissions inventory was developed by an environmental consultant, the consultant is not claiming third-party verification.

Certified CO<sub>2</sub> Offsets

None identified.

## Strategic Planning

Score: 9

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Intensity)</b>	<b>25% per unit production</b>	<b>2002</b>	<b>2012</b>	<b>Global manufacturing operations</b>
<b>Energy Use</b>	<b>10% per unit production</b>	<b>2004</b>	<b>2008</b>	<b>Global manufacturing operations</b>

Target Details

Avon's target is to reduce emissions per unit produced by an additional 5 percent below 2002 levels beyond the 20 percent reduction the company has already achieved.

Target Achievement

In 2005 Avon established a goal within global manufacturing operations to reduce total energy consumption per unit produced by 10 percent by 2008, compared to 2004 levels; the company surpassed this target, reducing energy use at global manufacturing sites by 30 percent between 2000 and 2007. In 2007, the company reduced total emissions per unit of production by approximately 20 percent below 2002 baseline levels.

Energy Efficiency

Avon has targeted its newest facility in the Midwest to achieve LEED Gold certification. Construction is also underway for a building in the UK for which the company aims to achieve the same level of LEED certification. In addition, Avon's Information Technology group has launched global implementation of a computer software program designed to

# AVON PRODUCTS, INC.

automatically shut off thousands of desktop computers at prescribed times to reduce energy consumption.

*Renewable Energy*

Avon plans for its newest Midwest facility to receive 35 percent of its electricity from renewable sources.

*Emissions Trading*

None identified.

*Products & Services*

None identified.

*Research & Development*

None identified.

*Supply Chain Management*

None identified.

# THE ESTEE LAUDER COMPANIES INC.

NYSE – EL  
Personal and Household Goods

Estee Lauder has not made public a formal strategy to address the risks and opportunities posed by climate change. There is no evidence of board leadership with respect to climate change, and the company has not set greenhouse gas (GHG) emissions reduction targets. However, Estee Lauder has participated in several EPA programs to address energy efficiency and GHG emissions reduction.

**Summary Score: 24**

## Company Information

The Estee Lauder Companies Inc. is a manufacturer and marketer of skin care, makeup, fragrance and hair care products. Its products are sold in over 140 countries and territories under brand names such as Estee Lauder, Aramis, Clinique, Prescriptives and others. It is also the global licensee for fragrances and/or cosmetics sold under several brand names. Estee Lauder has been controlled by the Lauder family since the founding of the company. At June 30, 2008, the company had approximately 32,000 full-time employees worldwide.

### Contact Information

**Chairman:** Leonard A. Lauder

**CEO:** William P. Lauder

**Website:** [www.elcompanies.com](http://www.elcompanies.com)

**Address:** 767 Fifth Avenue, New York, NY 10153 United States

## Board Oversight

**Score: 0**

<i>Board Committee/Member</i>	None identified.
<i>Board Role</i>	None identified.
<i>Board Training</i>	None identified.

## Management Execution

**Score: 6**

<i>CEO Leadership</i>	CEO William Lauder briefly addresses some of the company's climate change initiatives in his opening message to the 2007 sustainability report, noting the company's installation of a solar energy system and other renewable energy purchases.
<i>Company Strategy</i>	Estee Lauder has published an Environmental and Safety Policy. The policy does not address climate change-specific issues.
<i>Executive Responsibility</i>	Estee Lauder has a Corporate Environmental Affairs & Safety Committee, which "acts as the unifying force and focal point for programs, initiatives and communications related to environmental performance, workplace safety and associated issues."
<i>External Initiatives</i>	Estee Lauder has joined the following initiatives: US EPA Climate Leaders; US EPA ENERGY STAR; US EPA Smartway Transport Partnership (Aveda only); US EPA Green Power Partnership (Aveda only). The company also voluntarily reports greenhouse gas emission reductions as part of the Energy Information Administration's 1605 B program.
<i>Employee Training</i>	None identified.



# THE ESTEE LAUDER COMPANIES INC.

*Executive Compensation* The annual performance reviews of Estee Lauder employees in the manufacturing and related areas are partially based on reaching their sites' environmental health and safety objectives. The company does not mention climate-specific factors considered in compensation.

## Public Disclosure

**Score: 3**

*Annual Report* Estee Lauder briefly mentions Aveda's renewable energy purchases in its 2007 Annual Report.

*Securities Filings* In Item 1A ("Risk Factors") of the company's Form 10-K filing, Estee Lauder states: "In addition, sudden disruptions in business conditions...as a result of adverse weather conditions or climate changes, can have a short and, sometimes, long-term impact on consumer spending."

*Other Disclosure* Estee Lauder provides information on its climate change initiatives in the "citizenship" section on its website and in its 2007 sustainability report, which is published in HTML format on the company's website.

**Sustainability Report:** *Corporate Responsibility Report 2007*

**URL:** <http://www.elcompanies.com/csr2007/index.html>

**GRI:** None identified.

*Carbon Disclosure Project* Declined to participate.

*Public Policy* None identified.

## Emissions Accounting

**Score: 10**

*GHG Emissions Inventory* **Year:** FY2006 **Facility/Region:** Global Operations facilities **Protocol:** Other

Emissions	CO <sub>2</sub> e (Metric Tonnes)
<b>Total Emissions</b>	<b>53,000*</b>
<b>Scope 1 (Direct)</b>	—
<b>Scope 2 (Indirect –Electricity)</b>	—
<b>Scope 3</b>	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

\* Includes Scope 1, Scope 2 and employee business travel for Global Operations facilities.

*Accounting Methods* None identified.

*External Verification* None identified.

*Certified CO<sub>2</sub> Offsets* Aveda offsets 100 percent of the electricity used at its distribution center and main manufacturing plant in Minnesota by purchasing wind energy credits.

# THE ESTEE LAUDER COMPANIES INC.

## Strategic Planning

Score: 5

<i>Emissions Reduction Targets</i>	Estee Lauder says that it plans to calculate the complete carbon footprint of the company and develop GHG emissions targets in 2008.
<i>Energy Efficiency</i>	Through its Energy Conservation Program, Estee Lauder has reduced its energy consumption by more than 84,000,000 kWh. The company has reduced annual electricity use by over 15.9 million kWh.
<i>Renewable Energy</i>	As noted above, Aveda purchases wind energy credits to offset electricity used at facilities in Minnesota. The Aveda Institute of San Antonio is purchasing 100 percent wind power for its electricity needs as well.
<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	None identified.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	Aveda has joined with the US EPA Smartway Transportation Partnership to reduce the GHG emissions generated by the distribution of its products.

Johnson & Johnson set its first absolute greenhouse gas (GHG) reduction goal in 1999 and it has since exceeded its target despite corporate growth (including the impact of RECs and carbon offsets). Johnson & Johnson's climate change strategy is governed by its Climate Friendly Energy Policy, which was approved by the executive committee. Each business unit is held accountable for progress on meeting the policy's objectives. In 2004, Johnson & Johnson established a CO<sub>2</sub> Reduction Capital Funding Process with a \$41 million target for energy and GHG reduction projects. The company's board of directors oversees climate initiatives through the Public Policy Advisory Committee.

**Summary Score: 71**

## Company Information

Founded in 1886 as a medical products company, Johnson & Johnson now has more than 250 global operating subsidiaries and 119,200 employees. The company conducts research and development, manufactures and sells a broad range of products in the health care field. Its three business segments are consumer health care, pharmaceuticals and medical devices & diagnostics.

### Contact Information

**Chairman/CEO:** William C. Weldon

**Website:** [www.jnj.com](http://www.jnj.com)

**Address:** One Johnson & Johnson Plaza, New Brunswick, New Jersey, 08933, United States

## Board Oversight

**Score: 8**

### Board Committee/Member

Public Policy Advisory Committee

### Board Role

Johnson & Johnson says in its Carbon Disclosure Project response that climate change is the responsibility of the Public Policy Advisory Committee of the Board. The Committee is tasked with regularly reviewing company environmental policies and practices and making recommendations to the full board on environmental matters. Twice per year, the Committee receives briefings from the Vice President of Worldwide Environment, Health & Safety on climate change strategy and results. The Public Policy Advisory Committee charter is not available online.

### Board Training

A portion of the agenda at each of the semiannual meetings for the Public Policy Advisory Committee is dedicated to environmental issues, information, and training.

## Management Execution

**Score: 13**

### CEO Leadership

CEO William Weldon represents Johnson & Johnson at USCAP meetings. He also addressed the status of the company's carbon reduction goal at the 2008 annual shareholders meeting.

### Company Strategy

Johnson & Johnson's Climate-Friendly Energy Policy was approved by the Executive Committee in 2003. The policy requires each business to take action to reduce greenhouse gas emissions to meet the company-wide carbon dioxide reduction goal of a 7 percent absolute reduction of CO<sub>2</sub> emissions from stationary sources by 2010 relative to 1990 levels. The company's Healthy Planet 2010 set of goals also targets a 30 percent decrease in emissions

per kilometer driven for the company's fleet of cars relative to 2003. The Energy Policy sets out five types of measures to reach the climate goals:

- Energy efficiency improvements at all operations
- Cogeneration
- Onsite renewable energy use
- Renewable electricity purchases
- Carbon trading and sequestration

*Executive Responsibility*

Responsibility for climate change matters is spread between corporate functions where relevant, such as the energy and procurement functions. Dennis Canavan is Johnson & Johnson's Senior Director of Global Energy. The Corporate Group Operating Committee, which includes the CEO and other members of the Executive Committee, receives regular reports on climate change strategy and results, from the Vice President of Worldwide Environment, Health & Safety. The VP of EH&S also reports to the Public Policy Advisory Committee of the board on climate matters twice yearly.

*External Initiatives*

Johnson and Johnson has joined the following external initiatives: The Climate Group (UK); US Climate Action Partnership; WRI's Green Power Market Development Group; WWF's Climate Savers; US EPA Climate Leaders; US EPA Green Power Partnership; US EPA SmartWay; California Climate Action Registry; The Climate Registry; and CDP's Supply Chain Leadership Collaboration.

*Employee Training*

As part of its Health Planet 2010 goals, Johnson & Johnson plans to increase employee environmental literacy by 2010 by having every facility create a five-year education plan and conduct one environmental education campaign each year. Each year the campaign focuses on a different environmental topic; called ClimateCare in 2007, the campaign educated employees about climate change, and Seek the Source in 2008 educates employees about sustainable forestry.

*Executive Compensation*

2010 Healthy Planet Goals are part of the performance dashboard which impacts executive compensation within the business units.

---

## Public Disclosure

**Score: 9**

*Annual Report*

Johnson & Johnson's 2007 Annual Report discusses its greenhouse gas emissions reductions and renewable energy use as part of a section on responsible resource consumption. The discussion highlights the company's use of solar power.

*Securities Filings*

No climate change mention.

*Other Disclosure*

Johnson & Johnson provides information on its greenhouse gas emissions reduction measures in its 2008 sustainability report. The company also discusses J&J's view on climate regulation and its efforts to reduce GHG emissions in its supply chain.

**Sustainability Report:** *Johnson & Johnson 2007 Sustainability Report*, May 2008

**URL:** <http://www.jnj.com/connect/pdf/publications-pdf/2007-sustainability-report.pdf>

**GRI Accordance:** G3 Guidelines; No declared application level

# JOHNSON & JOHNSON

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* Johnson & Johnson identifies an extreme weather event that disrupts business as the greatest climate related risk the firm faces. Each major operation has a business continuity strategy in place. Moreover, each business segment could manufacture its products in more than one location. J&J reviewed physical risks by geographic area for its manufacturing facilities and determined that its Puerto Rico facilities are most at risk. There are cost implications to the company but J&J says that business interruptions or increased insurance premiums will similarly impact other businesses and other sectors. As a non-energy intensive business J&J anticipates potential regulatory costs will be negligible. The company also estimated the business impact of a 25, 50 or 100 percent increase in energy costs and determined the impact to be insignificant relative to sales.

*Public Policy* As a member of USCAP which it joined in May 2007, J&J supports a market approach to federal climate regulation in the U.S. In 2006, Johnson & Johnson wrote a letter to U.S. Congressmen recommending that Congress extend the Federal Production Tax Credit for Renewable Energy. In May 2008, through WWF Climate Savers program the company sent letters to Senators Reid and McConnell, and copied all other US Senators, in support of the Lieberman-Warner Climate Security Act. The company has also issued letters of support for state legislation in California and New Jersey as follows: a letter to Governor Schwarzenegger endorsing the California Global Warming Solutions Act in September 2006 and a letter to New Jersey legislators for the NJ Climate Change Bill in May 2007.

In Europe, J&J submitted a letter in April 2007 to EU President Jose Manuel Barroso expressing support of the European Energy Strategy to set aggressive GHG reduction goals. Christine Poon signed the Bali Communique on behalf of J&J in support of international action on climate change at the UN Conference of the Parties meeting in Bali in December 2007.

## Emissions Accounting

Score: 14

*GHG Emissions Inventory* Year: 2007 Facility/Region: Global Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	343,242*
Scope 2 (Indirect –Electricity)	579,909
Scope 3	—
Travel	243,862
Logistics	—
Products	—
Supply Chain	—

\* Global Stationary Combustion Sources Only; data for owned/leased airplanes and cars are available for the U.S. but not yet for outside of the U.S.

*Accounting Methods* Johnson & Johnson has established an Inventory Management Plan which was guided by US EPA's Climate Leaders program and the WRI/WBCSD GHG Protocol guidelines.

*External Verification* EPA Climate Leaders conducts desktop reviews of J&J's inventory data and on-site reviews of the Inventory Management Plan. J&J is a member of the California Climate Action Registry which verified its 2006 and 2007 emissions in California. In 2009, the company will report and verify its data through the Climate Registry in the UK.

*Certified CO<sub>2</sub> Offsets* Johnson & Johnson views carbon offsets as a way to support large scale renewable projects that would not be possible on its own sites. The company also needed to purchase offsets to reach its absolute GHG reduction target. The company spent about \$1.5 million on RECs, offsets and green power premiums in 2007. J&J says that all are third-party verified. In the United States, the purchased offsets are "green E-certified" by the Center for Resource Solutions.

## Strategic Planning

Score: 27

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Absolute)</b>	<b>7%</b>	<b>1990</b>	<b>2010</b>	<b>Global</b>
<b>Energy Efficiency</b>	<b>30% decrease in emissions/km driven</b>	<b>2003</b>	<b>2010</b>	<b>Global</b>

*Target Details* The GHG reduction target was originally set in 1999 and then reestablished in the Climate-Friendly Energy Policy adopted in 2003. The target is for CO<sub>2</sub>, which is the company's major GHG, and is for stationary combustion sources only. The policy states that the target is to be achieved through five elements including energy efficiency and renewable energy use. The company's Healthy Planet 2010 set of goals also targets a 30 percent decrease in emissions per kilometer driven for the company's fleet of cars relative to 2003.

*Target Achievement* Johnson & Johnson has exceeded its target, reducing carbon dioxide emissions by 12.7 percent between 1990 to 2007, at the same time that global sales increased by over 400 percent. This reduction factors in the impact of RECs and carbon offsets.

*Energy Efficiency* Johnson & Johnson is improving energy efficiency through engineering measures and equipment upgrades according to Dennis Canavan, Senior Director of Global Energy. In addition, J&J is installing on-site cogeneration. J&J has four buildings that are US Green Building Council LEED certified, which could indicate that the buildings have incorporated either or both energy efficiency and other environmentally-friendly measures. The company also has the largest corporate fleet of hybrid cars (978) according to Automotive Fleet Magazine. An additional 508 hybrids have been ordered.

Johnson & Johnson established a CO<sub>2</sub> Reduction Capital Funding Process at the Group Finance level in 2004. The target is \$40 million made available per year for energy and GHG reduction projects. Each J&J affiliate can apply for funding relief for such projects within this program. As of year-end 2007, 31 projects were complete. As of May 2008, 51 projects are approved and should save 90,044 tons CO<sub>2</sub> annually after completion. J&J has budgeted \$99 million for the projects and anticipates an average rate of return of 16.3 percent.



# JOHNSON & JOHNSON

*Renewable Energy* Johnson & Johnson has installed more than 4.1 MW of solar photovoltaic generation at ten locations in the US, making it the 2nd largest corporate user of on-site solar energy in the United States according to WRI as of May 2008. J&J is constructing its second geothermal facility, and it will also use wood pellets as boiler fuel in its Cork, Ireland facility. J&J also purchases electricity generated from renewable sources and according to the US EPA, it is the seventh largest purchaser in the United States.

*Emissions Trading* Johnson & Johnson says in its Carbon Disclosure Project response that it currently participates in the voluntary carbon market, although it is not clear which market. The company has two facilities covered by the EU ETS located in Geel & Beerse Belgium. The allocation plans for Phase II are not yet available since the Belgian plan was refused by the EU. J&J anticipates that there will be a 5 percent reduction in its allocation to meet the EU quota.

*Products & Services* Johnson & Johnson says in its Carbon Disclosure Response that while some of its health care products may be in increased demand due to the effects of climate change, or that society may need new health care solutions, there is no certainty that this will be the case and the company has not yet conducted such an analysis.

*Research & Development* None identified.

*Supply Chain Management* With regard to its suppliers, the company's energy and procurement functions have just begun collaborating on how to measure and reduce the carbon footprint of the supply chain. The company has joined the Carbon Disclosure Project's Supply Chain Leadership Collaboration and will begin asking its suppliers to respond to CDP starting in 2009.

With regard to logistics, the Global Transportation Organization which is the division responsible for product transport participates in the US EPA's SmartWay program which aims to increase transport efficiency. The company has increased shipments by rail by 18 percent since mid-2006 in the US and Canada and it uses trucks more efficiently. The division encourages carriers to become SmartWay members, which the company then uses as a distinguishing characteristic in carrier selection. In total, 73 percent of its business is contracted to SmartWay carriers, who employ measures such as double-wide tires to increase efficiency.

GlaxoSmithKline launched a new climate change strategy in 2007, rolling out new greenhouse gas (GHG) emissions reductions targets. To fund energy efficiency and on-site renewable projects the company set aside a central fund, and relaxed its normal return on investment for deployed capital. GSK is unique even among pharmaceutical companies in that two-thirds of its climate impact derives from customer use of inhalers for asthma and respiratory disease. Inhalers use potent GHGs as a propellant to deliver the medicine. The company has committed to phasing out the most potent propellant, CFCs, by 2010.

**Summary Score: 57**

## Company Information

GlaxoSmithKline's three major product lines are prescription medicines, vaccines and consumer healthcare. GSK estimates that it has seven percent of the global pharmaceutical market. The company is headquartered in the UK, but bases its operations in the US. GlaxoSmithKline as it exists today was formed by the 2001 merger of Glaxo Wellcome and SmithKline Beecham, but its history dates to a pharmacy founded in London in 1715. GSK operates in more than 100 countries and employs about 100,000 people.

### Contact Information

**Chairman:** Sir Christopher Gent  
**CEO:** Andrew Witty

**Website:** [www.gsk.com](http://www.gsk.com)

**Address:** 980 Great West Road, Brentford, Middlesex TW8 9GS, United Kingdom

## Board Oversight

**Score: 6**

<i>Board Committee/Member</i>	Sir Christopher Gent, Board Chair and Chair of the Corporate Responsibility Committee
<i>Board Role</i>	In 2007 the Corporate Responsibility Committee reviewed GSK's progress on climate change matters. The Committee also signs off on the annual Corporate Responsibility report.
<i>Board Training</i>	None identified.

## Management Execution

**Score: 10**

<i>CEO Leadership</i>	None identified.
<i>Company Strategy</i>	<p>GSK launched a new climate change strategy in 2007. The strategy will cut energy use in operations, as well as product transport and employee travel. New targets aim to reduce energy use per unit of sales by 20 percent by 2010 and 45 percent by 2015. The standard payback period for return on investment is relaxed for climate projects and a central fund, distinct from the operating budget, has been established to pay for energy efficiency measures which will include:</p> <ul style="list-style-type: none"> <li>■ Improving the energy efficiency of buildings and equipment</li> <li>■ On-site renewable power such as wind and solar</li> <li>■ Buying renewable electricity</li> <li>■ Switching from air to sea freight and transporting more product per load</li> </ul>

GSK is also researching how to reduce GHG emissions from customer inhaler use. Only two percent of GSK inhalers still use CFCs, a potent GHG and an ozone depleting substance as a propellant. CFCs will be phased out by 2010, but their replacements, HFAs are a less potent GHG. Inhaler use is responsible for two-thirds of the company's climate impact.

*Executive Responsibility*

The Corporate Executive Team is responsible for environment, health and safety matters with the Chief of Staff the operational champion on the team. The Vice President of Corporate Environment, Health and Safety supports the Chief of Staff and provides leadership in this area, making periodic presentations on climate change progress to the Team and the Corporate Responsibility Committee of the board.

An External Stakeholder panel comprised of investors, NGO representatives, regulators and customers meets annually to review EHS matters including climate change.

*External Initiatives*

None identified.

*Employee Training*

GSK runs regular campaigns to increase employee awareness of energy saving behavior.

*Executive Compensation*

Although climate change is not one of the factors influencing the compensation of executives, managers tasked with developing and implementing the company's energy reduction and climate change strategy do have their remuneration linked to progress in this area.

## Public Disclosure

**Score: 9**

*Annual Report*

GSK's adopted climate change strategy is discussed as one of the company's 2007 accomplishments in its annual report, as part of the regulatory environment section of the business review.

*Securities Filings*

The annual report is submitted to the SEC as the 2007 Form 20-F.

*Other Disclosure*

GSK highlights its newly adopted climate change strategy in its Corporate Responsibility Report and on its website, including new, more stringent targets. GSK also issued a public policy statement on climate change addressing the international consensus on the science and causes of climate change and outlining GSK's strategy on all related aspects including emissions trading, offsets, targets, funding, suppliers and product impacts.

**Sustainability Report:** FY07 *Corporate Responsibility Report*, March 2008

**URL:** <http://www.gsk.com/responsibility/cr-review-2007/downloads/CR-Report-2007.pdf>

**GRI Accordance:** No self-declared application level; GRI Index provided

*Carbon Disclosure Project*

Answered Questionnaire (Public)

*CDP6 Risk Disclosure*

GSK discusses its requirements under the EU ETS and the Montreal Protocol, which limits ozone depleting substances, some of which happen to also be GHGs. It notes that the proposed UK Carbon Reduction Commitment, a cap-and-trade system would impact several additional GSK facilities. In addition, EU regulation on HFCs in vehicles could be expanded to other uses. GSK uses HFCs in more than 10,000 pieces of refrigeration equipment, which would be costly to replace.

GSK states that the physical risks of climate change could impact GSK's operations, supply chain, employees and customers. Some of its primary manufacturing facilities are in coastal or low-lying areas, but all facilities must have a business continuity plan, which is audited annually. The plan sometimes require that facilities maintain high levels of stock. Decreased raw material availability due to rising temperatures is a concern, and the company is sponsoring research into black current yields under higher temperature conditions since black currents are used in its Ribena product.

The potential for health impacts could pose a risk which is difficult to quantify. GSK also anticipates rising energy prices, but says that it is not a significant concern since energy costs are a small contribution to the cost of goods for its sector.

GSK discusses its risk management structure. Key risks are reported to the Risk Oversight Compliance Council, which is chaired by the corporate compliance officer and includes at least three members of the Corporate Executive Team appointed by the CEO. The physical risks of climate change have not been identified as key business risks.

#### Public Policy

GSK states that it supports the principles of the Kyoto Protocol. The company says that it engages with policymakers through membership in industry associations. It is not clear if GSK has engaged with policymakers, independently or through industry associations, on the topic of climate change.

## Emissions Accounting

Score: 14

GHG Emissions Inventory

Year: 2007

Facility/Region: Global Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)	
Scope 1 (Direct)	871,772	* Air travel only
Scope 2 (Indirect –Electricity)	1,094,982	** Inter country distribution only
Scope 3	—	***Patient use of inhalers
Travel	109,962*	
Logistics	133,639**	
Products	3,588,797***	
Supply Chain	—	

Accounting Methods

All calculations are based on the GHG protocol.

External Verification

SGS United Kingdom Ltd provided external assurance for some of the data presented in the CR report, including some climate and energy data. Emissions provided to the EU ETS are independently verified.

Certified CO<sub>2</sub> Offsets

GSK states that it will research carbon offset opportunities for emissions determined to be unavoidable only. Only projects that are third-party verified will be considered.

## Strategic Planning

Score: 18

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Absolute)</b>	<b>10%</b>	<b>2006</b>	<b>2010</b>	<b>Global</b>
<b>GHG Emissions (Intensity)</b>	<b>45% per unit net operating revenue</b>	<b>2006</b>	<b>2015</b>	<b>Global</b>

### Target Details

As part of its new climate change strategy, GSK plans to decrease its CO<sub>2</sub>e emissions intensity by 20 percent by 2010 and by 45 percent by 2015 relative to 2006 levels. The intensity target is relative to net operating revenue, adjusted for constant exchange rates.

GSK has set a separate target to phase out CFC use in its inhalers by 2010. Inhaler propellants (CFCs and HFAs) constitute two-thirds of GSK's climate change impact.

### Target Achievement

GSK reduced its GHG emissions from energy used in operations, transport and business travel by 2 percent in 2007. The company estimated that between 2006 and 2007, it saved roughly 46,000,000 kWh or \$4.5 million.

### Energy Efficiency

GSK has reduced energy use since 2001 by more than 8 percent through operational efficiency measures such as switching to efficient lighting and optimizing equipment use. To reach its new emissions targets, GSK allows for a longer payback period on investments and it created a central fund to pay for the projects. During 2008, the company identified more than 400 eligible projects, mostly energy efficiency related, and allocated \$60 million for their support. Potential energy efficiency measures noted in the corporate responsibility report include making buildings and equipment increasingly efficient. Green Chemistry process improvements could also contribute to energy efficiency. GSK estimates that it will need a \$600 million investment to reach its 2015 emissions reduction target.

### Renewable Energy

GSK states in its climate change position statement that it will preferentially purchase renewable electricity. The company also plans to install on-site solar and wind power, such as at its facility in Jurong, Singapore.

### Emissions Trading

Sixteen GSK facilities regulated by the EU ETS collectively did not exceed their emissions allocations. The sale of surplus credits generated funds that were reinvested in energy conservation programs. GSK UK operations also participate in the UK voluntary Climate Change Agreement scheme which gives energy tax rebates to firms that meet energy efficiency targets. The company expects that it will be able to meet their commitments under the Agreement in 2008.

### Products & Services

GSK's Climate Change Team, comprised of representatives from all major business sectors and corporate functions, evaluates business opportunities that may arise from climate change. Significant opportunities need approval from business sector managers or the Corporate Executive Team. GSK anticipates that many of its current products - asthma and other respiratory disease products, antibacterials, anti-depressants, anti-malarials and vaccines - will be useful to governments in responding to the increased disease burden due to climate change. In addition, new medicines may be needed in the areas in which GSK conducts ongoing research.

### Research & Development

None identified.

## *Supply Chain Management*

GSK encourages both suppliers and contractors to measure and minimize their energy use and GHG emissions and to report on progress to GSK. In 2007, the company tested an electronic reporting system asking 52 critical suppliers to provide EHS data. A total of 21 suppliers responded providing data on total and renewable energy use among other parameters. The company includes EHS standards in their supplier contracts and conducts regular audits of 150 critical pharmaceutical and consumer healthcare product suppliers. A supplier must score a 50 percent in an audit, which is then used to develop improvement plans.

GSK is working to use sea routes instead of air for product transport, and optimizing route planning so that containers do not return empty.



Novartis developed an Energy and Climate Strategy to enable it to meet its company-wide greenhouse gas (GHG) emissions reduction target of 5 percent below 1990 levels by 2012, as adopted from the Kyoto Protocol. On-site energy efficiency and renewable energy projects, managed by local energy advisors and facilitated by a relaxed return on investment schedule, are the first steps towards meeting its target. External carbon-offset projects are the second. The company has also set a separate vehicle fleet target and is on its second generation energy efficiency target, which it exceeded in 2007. Although the company's energy and climate management structure is extensive including individuals at the group, business and site levels, board oversight appears to be minimal. The company declined to comment on this profile by deadline.

**Summary Score: 56**

## Company Information

Novartis develops and markets health care products in four business lines: Pharmaceuticals, Vaccines & Diagnostics, Sandoz, which focuses on generic drugs and Consumer Health, which is comprised of over-the-counter, vision and animal health products. Novartis was formed in 1996 from the merger of Sandoz and Ciba-Geigy. It is headquartered in Basel, Switzerland and has operations in 140 countries with nearly 100,000 employees.

### Contact Information

**Chairman/CEO:** Daniel Vasella, M.D.

**Website:** [www.novartis.com](http://www.novartis.com)

**Address:** Lichtstrasse 35, CH-4056 Basel, Switzerland

## Board Oversight

**Score: 3**

### Board Committee/Member

Audit and Compliance Committee.

### Board Role

The Audit and Compliance Committee monitors corporate citizenship audits and compliance. Promulgating corporate policies including environmental policies is listed among the responsibilities of the full board of directors in the 2007 Annual Report.

### Board Training

None identified.

## Management Execution

**Score: 11**

### CEO Leadership

None identified.

### Company Strategy

Novartis' Energy and Climate strategy, available on the company website, is to increase operational energy efficiency and on-site renewable energy and to then use external carbon offset projects to compensate further for company GHG emissions.

### Executive Responsibility

Energy and climate matters are managed through the Health, Safety and Environment (HSE) management system at the group, business unit and site levels. The Head of Corporate Affairs, who is a member of the Executive Committee and who reports to the president and CEO, is ultimately responsible for climate and energy matters. The Novartis Corporate Environment and Energy Manager in the Corporate Health, Safety and Environment department manages the Energy and Climate Strategy.

At the Business Unit level, global energy coordinators manage business unit energy programs. Decisions on such programs are made as part of the annual HSE Management Reviews, and are a regular agenda item at HSE Steering Committee meetings.

Local energy advisors have been appointed as part of the Energy and Climate Strategy to manage the energy programs at specific companies or sites.

*External Initiatives* Novartis has joined the following external initiatives: UNGC/UNEP/WBCSD “Caring for Climate: The Business Leadership Platform”; Pew Center on Global Climate Change Business Environmental Leadership Council.

*Employee Training* HSE site officers and data managers were trained on the new HSE management system at its rollout in 2006. The system improves consistency of energy reporting. Energy workshops (15 between 2004 and 2008) enable information exchange between engineers, energy experts and facility managers, who also receive a quarterly energy newsletter. All employees can elect to receive the newsletter, and can further educate themselves on climate and energy through the Novartis intranet which contains information and case studies. Employees can also submit projects for the annual Energy Excellence Awards.

*Executive Compensation* Variable compensation for executives is not linked to climate targets; however Novartis’ Carbon Disclosure Project response notes that energy and climate are among the key HSE targets for line management and site management.

## Public Disclosure

Score: 7

*Annual Report* The 2007 Annual Report Commitment to the Environment section describes progress against Novartis’ goal to meet the Kyoto Protocol GHG emissions reduction targets. In his letter to shareholders, Chairman and CEO Vasella also highlights this progress.

*Securities Filings* No climate change mention.

*Other Disclosure* Novartis has a corporate citizenship website which includes data on HSE performance, management and minimizing impacts, including energy and GHG emissions. The company also issues a GRI report, which maps its HSE information to the G3 GRI indicators.

**Sustainability Report:** FY07 Novartis GRI Report, July 2008

**URL:** [http://www.corporatecitizenship.novartis.com/downloads/managing-cc/novartis\\_2007\\_gri\\_report.pdf](http://www.corporatecitizenship.novartis.com/downloads/managing-cc/novartis_2007_gri_report.pdf)

**GRI Accordance:** G3 Application Level A+

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* Novartis does not anticipate major regulatory or commercial risks from climate change. Novartis acknowledges that its operations near coastlines such as Singapore and Shanghai might eventually require protective measures and that land costs in these areas could increase. Operations in alpine areas that currently use nearby freshwater for non-contact cooling could face diminished freshwater availability and may need to switch to increasingly expensive electricity for cooling. Rising energy prices could also become a significant cost for

its operations where energy can comprise up to 5 percent of total costs. In addition, business travel will be more expensive.

Perhaps the most significant long-term climate risk Novartis may face is the potential loss of biodiversity due to a changing climate. A significant number of anti-cancer and anti-infective agents are derived from natural sources, which Novartis continually screens for medicinal properties.

*Public Policy* Novartis does not engage directly with policymakers on climate change matters.

## Emissions Accounting

**Score: 14**

*GHG Emissions Inventory*

**Year:** 2007

**Facility/Region:** Global

**Protocol:** GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
<b>Scope 1 (Direct)</b>	<b>585,641</b>
<b>Scope 2 (Indirect –Electricity)</b>	<b>882,615</b>
<b>Scope 3</b>	—
Travel	<b>146,000*</b>
Logistics	—
Products	—
Supply Chain	—

\* Data from 85% of business travel is extrapolated to 100% of the company's operations.

*Accounting Methods*

Novartis uses an HSE data management system to compile energy use, cost and GHG emissions data. Energy use data is collected monthly and reported quarterly, while energy costs and GHG emissions are compiled and reported annually.

Scope 1 emissions are calculated via fuel type emission factors. Scope 2 emissions calculations use specific CO<sub>2</sub>e emissions factors for electricity and steam purchased from specific utilities where available, or standard state or country CO<sub>2</sub>e emission factors if needed.

*External Verification*

GHG emissions are one of the parameters on which PricewaterhouseCoopers performed tests on a data sample as part of their Assurance Engagement on the Corporate Citizenship / HSE section of the Novartis 2007 Annual Report.

*Certified CO<sub>2</sub> Offsets*

When it set its GHG reduction target in 2005, Novartis calculated that on average it would have to reduce or offset 152 ktons of CO<sub>2</sub>e annually to close the gap between the target and a business-as-usual scenario. After reducing the gap by 23–30 percent via energy efficiency and related measures, Novartis is turning to external offset projects for the remainder. It has established two carbon-offset projects which it plans to submit for CDM registration. The first is an afforestation project in Latin America, whereby plantations were started on pasture land Novartis purchased. The project is FSC certified. The second project is a jatropha plantation in Africa, which is a plant that can be used to make biofuel or electrical power.

## Strategic Planning

Score: 21

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Absolute)</b>	<b>5% reduction (Scope 1)</b>	<b>1990</b>	<b>2012</b>	<b>Global</b>
<b>Energy Efficiency</b>	<b>10%</b>	<b>2006</b>	<b>2010</b>	<b>Global</b>

#### Target Details

Novartis adopted the targets set out in the Kyoto Protocol, committing to a 5 percent reduction of Scope 1 GHG emissions, excluding vehicles, between 2008 and 2012, relative to 1990 levels. Novartis set a separate target to reduce CO<sub>2</sub> emissions from its vehicle fleet by 10 percent by 2010 from a 2005 baseline. The company has not set a Scope 2 emissions reduction target. Novartis also has an energy efficiency target of 10 percent by 2010 as compared to 2006.

#### Target Achievement

Novartis is on track to meet its Scope 1 GHG emissions reduction target. According to the Energy and Climate Strategy document on the company website, Novartis has calculated the emissions gap represented by the difference of its emissions target and a business-as-usual scenario, and it has reduced that gap by 25 to 30 percent using energy efficiency and renewable energy. The company is now turning to external carbon offset projects to make further progress in reducing the gap.

Novartis achieved its first generation energy efficiency target for 2004-2006, and set a second one to increase efficiency by 10 percent between 2007 and 2010 relative to 2006. That is a 2.5 percent average annual improvement, which the company exceeded in its first year, improving efficiency by 7.5 percent in 2007.

#### Energy Efficiency

Novartis has set its second energy efficiency target, for a 10 percent improvement between 2007 and 2010 relative to 2006, which is an average of 2.5 percent annually. In 2007, energy use was flat, and energy efficiency improved by 7.5 percent. The company's Climate and Energy Strategy includes several measures to encourage energy efficiency improvements. Minimum energy standards for buildings and equipment have been developed. To implement energy efficiency projects, Novartis relaxed its return on investment requirements. New investments or asset purchases of CHF 20,000 or more require an assessment of the energy implications. The company has also chosen to lease hybrid vehicles for its US fleet and diesel vehicles for its European fleet as part of its USD 23 million investment to improve the energy efficiency of its vehicle fleet.

Novartis conducts energy audits at its sites to identify any energy-saving opportunities. A 23-question index is a tool that site and business unit leaders can use to measure their energy management ability, as part of an audit or their own self-assessment. To help implement energy projects, Novartis allows for an extended investment payback schedule, up to the lifetime of the asset. New capital projects are also subjected to an Energy Challenge to ensure they reduce energy use, energy costs and greenhouse gas emissions.

<i>Renewable Energy</i>	Novartis makes use of biomass such as bagasse, derived from sugar cane, wood chips, and waste mycelium from antibiotic manufacturing as a renewable energy material. Some facilities have also installed solar photovoltaic panels or on-site combined heat and power installations. In 2007, 34.7 percent of total company electricity use was from on-site or purchased renewable energy.
<i>Emissions Trading</i>	Novartis sites regulated under the EU ETS received sufficient emissions allowances. The company does not expect to need to purchase any allowances during Phase II. Novartis plans to use the Kyoto Flexible Mechanisms; it has embarked on two projects that it will submit for registration under the CDM.
<i>Products &amp; Services</i>	Novartis anticipates that climate change may result in commercial opportunities in the market for medical treatments against tropical diseases. Vector borne diseases such as malaria and dengue fever could become more prevalent as a result of climate change. The Novartis Institute for Tropical Diseases conducts research on malaria, tuberculosis and dengue fever. The Novartis Vaccines and Diagnostics division could see business opportunities that arise from an expansion of tropical weather zones due to climate change. Novartis also conducts research on respiratory diseases such as asthma which could be impacted by climate factors.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	None identified.

Pfizer began addressing its climate change impact in 1996 and has made considerable progress. It has set and achieved a greenhouse gas (GHG) emissions intensity reduction target of 35 percent per million dollars of sales. Subsequently, the company set a second, absolute reduction target of 20 percent by 2012 from a 2007 baseline. In addition, the company has a target to increase its use of clean energy to 35 percent of total use by 2010. Pfizer's Energy and Climate Change Program manages progress towards the targets, monitors regulatory developments and participates in carbon trading with the intent to leverage market mechanisms to make additional energy projects more financially attractive.

**Summary Score: 50**

## Company Information

Pfizer is a research-based pharmaceutical and biomedical firm, with a product line that crosses 11 therapeutic areas of human medicine as well as animal vaccines and medicines. The company has major research facilities in the United States and England. In 2007, Pfizer invested \$8.1 billion in research and development and earned \$48.4 billion in revenues, making it the world's largest pharmaceutical company. As of 2007, the company had approximately 86,600 employees.

### Contact Information

**Chairman/CEO:** Jeffrey Kindler

**Website:** [www.pfizer.com](http://www.pfizer.com)

**Address:** 235 E. 42<sup>nd</sup> Street, New York, New York, 10017, United States

## Board Oversight

**Score: 3**

### Board Committee/Member

Audit Committee.

### Board Role

Although not specifically mentioned in its committee charter, Pfizer says in its Carbon Disclosure Project response that climate change is the responsibility of the Audit Committee of the Board. The charter explicitly tasks the Audit Committee with reviewing risks, legislation and regulation that may be material to the company. Further, the Corporate Governance charter indicates one of its Committee functions is "to maintain an informed status on Company issues related to corporate social responsibility and the Company's participation and visibility as a global corporate citizen."

### Board Training

None identified.

## Management Execution

**Score: 14**

### CEO Leadership

CEO Jeffrey Kindler has endorsed the UN Global Compact Caring for Climate: the Business Leadership Platform and attended the signatory event in May 2007.

### Company Strategy

Pfizer began addressing energy efficiency and GHG emission reductions in 1996. More recently, the company established an Energy and Climate Change Program which sets out the following company-wide commitments:

- To meet 35 percent of electricity needs by 2010 through "cleaner" energy technologies, such as co-generation.

- To reduce CO<sub>2</sub> emissions by 35 percent per \$US million revenue by 2007 from a 2000 baseline.
- To reduce CO<sub>2</sub> emissions by 20 percent on an absolute basis between 2008 and 2012 from a 2007 baseline.
- To reduce the impacts of its nearly 33,000 automobiles worldwide.
- To effectively manage the financial implications and opportunities associated with the energy reductions gleaned from conservation and clean energy projects.
- To identify the operating risks and business opportunities presented by a changing global climate.

## *Executive Responsibility*

Climate change is an area of environment, health and safety (EHS) management. Senior EHS personnel meet quarterly to review progress with the EHS Steering Team which is chaired by the Chief Compliance Officer and is comprised of Senior Leaders from the major operating units. The senior EHS personnel also meet with Pfizer's Executive Leadership Team twice yearly to review key initiatives, endorse goals and targets, and discuss opportunities and risks associated with a carbon-constrained environment. The Pfizer Worldwide Public Affairs and Policy leader also engages with external stakeholders on policy issues related to climate change.

## *External Initiatives*

The company has joined the following external initiatives: US EPA's Climate Leaders; WRI's Climate Northeast; Business Roundtable's Climate RESOLVE; UN Global Compact Business Leaders' Caring for Climate: The Business Leadership Platform.

## *Employee Training*

At the end of 2007, Pfizer began implementation of a communications campaign focused on employee energy awareness and employees' roles at home and at work in conserving energy and natural resources.

## *Executive Compensation*

In some instances, an annual energy efficiency target is included in an individual's performance management plan. It is not clear if such individuals include senior executives.

---

## Public Disclosure

**Score: 5**

### *Annual Report*

No climate change mention.

### *Securities Filings*

No climate change mention.

### *Other Disclosure*

On both its website and in its Corporate Responsibility Report Pfizer includes an extensive discussion of climate change and energy management. Notable disclosure includes a graph of progress against its GHG reduction goal indicating the GHG source. In addition, Pfizer presents a graph of clean energy use by type and a special, if brief, discussion of its green building program for its 70 million square feet of global owned or operated facility space.

**Sustainability Report:** FY07 Pfizer Corporate Responsibility Report, September 2007

**URL:** [http://media.pfizer.com/files/corporate\\_citizenship/cr\\_report\\_2007.pdf](http://media.pfizer.com/files/corporate_citizenship/cr_report_2007.pdf)

**GRI Accordance:** G3 Application Level B

## *Carbon Disclosure Project*

Answered Questionnaire (Public)



*CDP6 Risk Disclosure*

Pfizer discusses regulatory, physical and energy price risks in its CDP6 response. The company anticipates that climate change legislation will be passed in the US and will require significant GHG emission reductions for regulated entities. The Energy and Climate Team is monitoring legislative developments to determine applicability to its US operations. The company also states that disparate state and federal requirements could be a burden for companies. In Europe, the company has some facilities regulated under the European Union Emission Trading Scheme (EU ETS), but that number has decreased due to divestitures and Pfizer does not expect Phase II to have a major impact on covered facilities. Pfizer also discusses general commercial risks related to the sale or purchase of carbon instruments through voluntary markets and Kyoto market mechanisms.

Pfizer also states that EU ETS could result in increased energy costs. Similarly, federal regulation in the United States could increase operating costs for both regulated and unregulated entities. However, the company says that taxes, supply shortages and other market impacts have increased the cost of energy in the past but that it “prefer[s] to view these market impacts as opportunities to advance demand-side management projects, such as re-lamping projects, HVAC upgrades, and cogeneration projects.”

Although Pfizer does not expect near-term risks from the physical impacts of climate change, it does acknowledge that sea level rise and severe weather events could cause flooding and disrupt its operations or supply chain. It does not believe the risk to its current locations and distribution networks is high but it will reevaluate the risks as the business expands.

*Public Policy*

As stated in its CDP6 response, Pfizer has decided to refrain from active engagement with policymakers on climate change policy at the moment. However, the company believes that “urgent and extensive action” is required by governments, business and civil society. In addition, it believes that any mandatory program should reward proactive measures already taken to reduce GHG emissions. To facilitate that, a common GHG emissions reporting system and transparent GHG registry needs to be established.

**Emissions Accounting**

**Score: 7**

*GHG Emissions Inventory*

**Year:** 2007

**Facility/Region:** Global

**Protocol:** GHG Protocol

<b>Emissions</b>	<b>CO<sub>2</sub>e (Metric Tonnes)</b>
<b>Scope 1 (Direct)</b>	<b>1,058,047</b>
<b>Scope 2 (Indirect –Electricity)</b>	<b>1,136,126</b>
<b>Scope 3</b>	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

<i>Accounting Methods</i>	Pfizer has established an Inventory Management Plan which was approved by US EPA's Climate Leaders. The company used the operational control boundary approach and a materiality threshold of 5 percent. Data is based on facility invoices for purchased electricity, coal, fuel, oil and natural gas, steam and fleet and aviation fuels. Pfizer is in the process of measuring its Scope 3 emissions from business travel, employee commuting, supply chain, logistics and distribution and product disposal.
<i>External Verification</i>	None identified.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score: 21

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Intensity)</b>	<b>35% per \$ million of revenue</b>	<b>2000</b>	<b>2007</b>	<b>Global</b>
<b>GHG Emissions (Absolute)</b>	<b>20%</b>	<b>2007</b>	<b>2012</b>	<b>Global</b>
<b>Renewable Energy</b>	<b>35%</b>	<b>—</b>	<b>2010</b>	<b>Global</b>

*Target Details* Pfizer has set three targets relating to GHG emissions and energy. The targets are all company-wide. Pfizer's first target is to reduce CO<sub>2</sub> emissions by 35 percent per \$ million of revenue by the end of 2007 from the baseline year 2000. Pfizer set this goal as part of its membership in the US EPA Climate Leaders Partnership. The company then set a second generation goal to reduce worldwide CO<sub>2</sub> emissions on an absolute basis by 20 percent from 2008 to 2012 from a 2007 baseline. Finally, Pfizer has set a clean energy goal to meet 35 percent of its electricity needs by 2010 through the use of clean energy technologies. Clean energy sources are defined as wind, solar, biomass, hydro and co-generation.

*Target Achievement* At the end of 2007, Pfizer had reduced CO<sub>2</sub> emissions by 43 percent per million dollars of revenue which equates to an absolute reduction of 20 percent or 533,000 MTs of CO<sub>2</sub>e. Pfizer's direct emissions from its vehicle fleet accounts for approximately 12 percent of its total carbon footprint.

At the end of 2007, Pfizer obtained 16 percent of energy use from clean energy technologies. The company says this goal continues to present a challenge due to the loss of co-generation capacity within the company and the difficulty in purchasing electricity that is based on renewable energy.

*Energy Efficiency* Between 2000 and 2007, Pfizer implemented more than 1,000 energy conservation projects with a capital investment of approximately \$60 million. Energy Teams at Pfizer facilities around the world completed over 430 conservation-related projects during 2007, an increase of 40 projects over the previous year. These projects resulted in an overall 6 percent improvement in energy efficiency for Pfizer-owned facilities and a reduction of CO<sub>2</sub> emissions of more than 130,000 tons on an annual basis. Pfizer plans on making a comparable investment between 2008 and 2012 to continue to improve energy efficiency.

Energy efficiency projects are site specific, although Pfizer mentions company-wide energy conservation guidelines as part of its demand-side management program. At its Bornem, Belgium facility the company employed condensing boiler technology which increases boiler efficiency by 10 percent relative to conventional technology. Pfizer also has a company-wide green building program for its 70 million plus square feet of owned or operated building space. The program addresses energy use as well as environmental considerations such as indoor air quality and waste management.

To manage its vehicle emissions, Pfizer field-tested hybrid vehicles in 2007. Pfizer is also finishing its application for participation in the US EPA's SmartWay Program, which is a collaboration between the EPA and the freight industry to improve energy efficiency.

*Renewable Energy* Pfizer has set a goal of to derive 35 percent of electricity needs by 2010 from clean energy, which it defines as wind, solar, biomass, hydro and co-generation. As of the end of 2007, the company sources 16 percent of its energy from clean sources. To reach this goal, Pfizer implemented 11 clean energy projects at sites globally. An additional 17 projects are in the pipeline. Renewable energy projects are site specific. In Singapore, Pfizer installed a tri-generation facility resulting in a reduction of more than 11,175 MT CO<sub>2</sub>e. The company's La Jolla, California site recently installed a 240 kW solar panel system which will reduce electricity use by 24 percent annually.

*Emissions Trading* Pfizer says its emissions trading strategy is "one of preparedness." In addition the company will "leverage voluntary markets in renewable energy and energy efficiency to provide incentives for additional investment in energy conservation."

Pfizer facilities covered under the EU ETS for Phase I traded allowances between each other. The company received approval for a CDM project at its manufacturing facility in India. The project will convert boilers to a fuel derived from local sugar cane waste. In the United States, Pfizer was an early participant in the state of Connecticut voluntary market, generating and trading energy efficiency credits in 2006. The company has since implemented projects that will generate additional credits, some of which it plans to sell in the market.

*Products & Services* Pfizer anticipates that climate change will increase the need for access to medication for specific diseases, although the company does not elaborate on the commercial business opportunities this may present. Pfizer does say it is evaluating potential climate-related business opportunities.

*Research & Development* None identified.

*Supply Chain Management* Pfizer uses environmental, health and safety criteria to assess contractors and key pharmaceutical ingredient suppliers and it works with them to improve their EHS performance. It is not clear if the environmental criteria include energy or GHG emissions performance.

Pfizer plans to estimate its Scope 3 emissions from its supply chain for key pharmaceutical ingredient suppliers. It anticipates that this will be greater than 5 percent of total GHG emissions, and if so, Pfizer will include supply chain emissions in its Scope 3 inventory in the future.

# ROCHE HOLDING LTD.

SWISS STOCK EXCHANGE – RO  
Pharmaceuticals

Roche has reduced its energy use by 52 percent since 1992 (relative to sales). The company also achieved its first greenhouse gas (GHG) emissions reduction target early, and is now focused on its energy use target. In 2007, Roche was awarded the Financial Times/Citi Private Bank Environmental Award for the Greatest Improvement in Carbon Efficiency by a Large Enterprise.

**Summary Score: 49**

## Company Information

Founded in 1896 in Basel, Switzerland for the manufacture and sale of pharmaceutical products, Roche Holding now employs 79,000 people and sells its products in 150 countries. Roche has two focus areas: diagnostics and pharmaceuticals.

### Contact Information

**Chairman:** Dr. Franz B. Humer

**CEO:** Dr. Severin Schwan

**Website:** [www.roche.com](http://www.roche.com)

**Address:** Grenzacherstrasse 124, CH-4070 Basel, Switzerland

## Board Oversight

**Score: 5**

### Board Committee/Member

Corporate Governance and Sustainability Committee

### Board Role

The Corporate Governance and Sustainability Committee oversees compliance with environmental laws and principles, although the bylaws do not mention climate change specifically. The committee is also tasked with overseeing the preparation of the sustainability report.

### Board Training

None identified.

## Management Execution

**Score: 9**

### CEO Leadership

None identified.

### Company Strategy

Roche's climate strategy is to reduce CO<sub>2</sub> emissions through reducing energy use and to phase out CFCs and other halogenated coolants and fire fighting agents which comprise roughly two percent of the company's GHG emissions and are ozone depleting substances as well. A hybrid car initiative begun in 2004 is also reducing the company's climate change impact.

Energy and GHG emissions reduction goals were defined at a group level, then site specific targets were set to align with their performance to date. Sites developed specific action plans which were then revised by corporate safety, health and environment (SHE) to institute a group-wide approach to minimize Roche's climate impact.

### Executive Responsibility

The Corporate Safety and Environmental Protection (CSE) function is responsible for climate change issues, and it in turn reports to "the corresponding member" of the corporate executive committee. CSE tracks the company's GHG inventory, and keeps abreast of climate-related policy developments. The Corporate Sustainability Committee (CSC), which includes individuals from all divisions and corporate functions, sets environmental goals including those on energy and GHG emissions. Implementation of the energy saving and GHG

# ROCHE HOLDING LTD.

reduction plans is the responsibility of the site safety, health and environmental manager, known as SEOs.

*External Initiatives* The company has joined the following initiatives: US EPA Climate Leaders

*Employee Training* Roche brings together and trains its global site safety, health and environment managers (SEOs) on SHE goals. The SEOs in turn train their local employees. This training encompasses both lectures and hands-on courses. Roche also states that interested employees can participate in additional SHE education programs. In 2007, the company conducted 125,000 of SHE training for 51,500 employees. It is not clear if any of that training addressed climate change matters.

*Executive Compensation* None identified.

---

## Public Disclosure

Score: 7

*Annual Report* Roche incorporates its sustainability disclosure in its FY07 Business Report. The climate change disclosure focuses on energy use including on-site renewable energy and the contribution of the company's vehicle fleet and business travel to Roche's emissions profile.

*Securities Filings* No climate change mention.

*Other Disclosure* The corporate website includes the same sustainability discussion presented in the Business Report, as well as fact sheets detailing Roche's position and actions on climate change and hybrid vehicles.

**Sustainability Report:** Included in FY07 Roche Business Report

**URL:** <http://www.roche.com/gb07e.pdf>

**GRI Accordance:** G3 Application Level A+

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* Roche states that since the pharmaceutical industry is not considered to be GHG emission intensive, it does not expect to face regulatory risks. The company also states that physical risks are not expected to directly impact its business, although extreme weather could indeed cause a business interruption. Where needed, the company will perform risk analyses. Roche states that increasing energy prices related to GHG regulation pose a risk, although energy costs are less than 1 percent of manufacturing costs. Roche also states that climate-related transportation problems could impact their distribution and supply chain structure. The company has begun a global risk inventory which will include climate risks.

*Public Policy* Roche supports international action to limit climate change and supports the GHG reduction targets in the Kyoto Protocol. In its Carbon Disclosure Project response, Roche states that "contacts with policy makers take place via federations," but no further information is provided.

# ROCHE HOLDING LTD.

## Emissions Accounting

Score: 13

GHG Emissions Inventory Year: 2007 Facility/Region: Global Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
<b>Total Emissions</b>	—
<b>Scope 1 (Direct)</b>	<b>438,669</b>
<b>Scope 2 (Indirect –Electricity)</b>	<b>496,315</b>
<b>Scope 3</b>	—
Travel	<b>108,884</b>
Logistics	—
Products	—
Supply Chain	—

*Accounting Methods* Individual sites report energy information and subsequently Roche calculates CO<sub>2</sub> equivalents using conversion factors and net calorific values as published by the IPCC or IEA.

*External Verification* PricewaterhouseCoopers AG provided assurance on some sustainability data including performing sample tests on energy consumption and the GHG emissions associated with energy use.

*Certified CO<sub>2</sub> Offsets* None identified.

## Strategic Planning

Score: 15

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Intensity)</b>	<b>10% CO<sub>2</sub>e/million CHF sales</b>	<b>2003</b>	<b>2008</b>	<b>Global</b>
<b>Energy Use</b>	<b>10% GJ/employee</b>	<b>2005</b>	<b>2010</b>	<b>Global</b>

*Target Details* Roche originally set a group-wide target to reduce CO<sub>2</sub> emissions per million CHF sales by 10 percent by 2008 relative to 2003. The company also has a target to reduce energy use per employee by 10 percent through 2010 relative to 2005 energy use. In addition, Roche plans to phase-out halogenated hydrocarbons by 2010 or 2015 as prescribed in a Group Directive as follows: refilling of CFCs is no longer permissible and leaking installations have to be replaced; refilling of HCFCs will not be permitted after 2010, and after that date leaking installations must be replaced. HFCs and PFCs are not acceptable replacements for CFCs and HCFCs, and all equipment containing HFCs or PFCs must be replaced by 2015.

Group-wide targets will be met through variable site-specific targets. For instance, through US EPA Climate Leaders, Roche's US affiliates set a GHG reduction target of 10 percent by 2008

# ROCHE HOLDING LTD.

from a 2001 baseline. After meeting the target, US operations have set a second generation target to reduce emissions by an additional 15 percent by 2010 from the 2001 baseline.

*Target Achievement* The group-wide target to reduce CO<sub>2</sub> emissions by 10 percent per million CHF sales was achieved ahead of schedule. The US operations achieved its target two years early, reaching a 10.8 percent GHG emissions reduction by the end of 2006. Roche says it is on track to achieve its target for energy use as well.

*Energy Efficiency* Roche has reduced its energy use by 52 percent since 1992 (relative to sales). Roche has issued a Group Directive on energy conservation including energy standards for buildings and equipment. Energy efficiency measures include:

- More efficient manufacturing processes
- The use of efficient technology in new building construction, such as at the Graz, Austria and Welwyn Garden City, UK facilities
- Energy efficiency upgrades
- The promotion of fuel efficient cars such as hybrid vehicles

Every three years the company runs an ECompetition encouraging employees to submit suggestions to improve environmental performance. The fourth competition was in 2007 and it included several suggestions for energy conservation.

*Renewable Energy* Roche facilities in Spain and the United States use on-site solar power, and a California facility also purchases electricity generated from wind. Geothermal energy regulates temperature at the Rotkreuz, Switzerland facility, reducing its fossil fuel energy use by one-third. The Graz, Austria plant reduced energy and water needed for cooling by using cool outside air in the winter.

*Emissions Trading* Roche says in its Carbon Disclosure Project response that it does not support emissions trading and prefers to reduce energy use instead.

*Products & Services* None identified.

*Research & Development* None identified.

*Supply Chain Management* Roche has SHE standards for its suppliers and their subcontractors and it conducts audits of key supplier to ensure compliance. It is not clear if the SHE standards include energy use or GHG emissions.



Simon Property Group began implementing energy reduction programs for the company controlled portion of energy use at its mall properties in 2004, resulting in cost savings of \$12 million annually. The company reviews mall energy management systems quarterly and it considers energy price volatility, costs and the value of carbon emissions reductions in its annual budgeting process. The company is currently considering renewable energy purchases. Simon Property has not set GHG reduction targets and it does not disclose its annual energy use reduction targets. Board oversight of energy and climate risk management appears to be minimal. The company declined to comment on this profile by deadline.

**Summary Score: 38**

## Company Information

Simon Property Group owns, develops and manages retail real estate properties, predominantly malls, outlet centers and community centers. The company owned or held an interest in 320 income-producing properties in the United States as of December 2007. Outside of the US the company has interests in properties located in France, Italy, Poland, Japan, Mexico, South Korea and China. The company operates as a real estate investment trust and it owns its properties through majority owned subsidiary Simon Property LP. Simon Property employs more than 5,000 people worldwide.

### Contact Information

**Chairman/CEO:** David Simon

**Website:** [www.simon.com](http://www.simon.com)

**Address:** 225 West Washington Street, Indianapolis, Indiana, 46204, United States

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 10**

*CEO Leadership* None identified.

*Company Strategy* Simon Property does not appear to have taken steps to reduce climate impact from its own operations such as in the offices it occupies, however the company has been working on increasing energy efficiency in its portfolio of real estate properties since 2003. Simon states that since more than 95 percent of a building's carbon footprint is from energy use, reducing energy use through its properties portfolio-wide is a core climate change risk management strategy. Moreover, energy costs make up 25 to 35 percent of the company's controllable operating costs.

Simon Property's executive management puts an emphasis on energy matters, including energy price volatility and capital investment, during the annual budgeting process and in its quarterly review of operational results. In addition, the value of carbon emissions reductions is an added consideration in financial reviews of capital expenditures.

# SIMON PROPERTY GROUP, INC.

The Energy Services Department coordinates efforts to minimize energy costs. Remote monitoring of mall Energy Management Systems, and control over public area lighting and HVAC systems substantially minimize costs. In addition, Simon Property's experience indicates that exceeding local energy codes is often cost-effective on a life-cycle cost basis and contributes to significant energy use reductions.

<i>Executive Responsibility</i>	Executives and senior management at Simon Property Management are responsible for the energy efficiency and climate change initiatives according to the company's CDP6 response. Properties submit monthly energy reports to Simon Property Management and those that are lagging their targets need to provide an explanation and devise mitigation plans.
<i>External Initiatives</i>	None identified.
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	Personnel with property management responsibilities have incentive compensation plans that include goals related to energy performance. It is not clear if this includes executives at Simon Property Management such as the Vice President and Assistant Vice President for Energy Services.

## Public Disclosure

**Score: 8**

<i>Annual Report</i>	In his letter to shareholders, CEO David Simon highlights the recognition of Simon Property Group from the National Association of Real Estate Investment Trusts (NAREIT) and the US EPA for its energy conservation measures.
<i>Securities Filings</i>	In the 2007 Form 10-K, Simon Property notes that energy efficiency is a core sustainability strategy and its efforts have reduced absolute energy use at portfolio properties under operational control by 9.7 percent between 2003 and 2007. This excludes electricity consumed by tenants. The company also highlights the awards it has received from NAREIT and the US EPA.
<i>Other Disclosure</i>	None identified. Simon Property Group does not publish a sustainability report.
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	<p>Simon Property states that it could face two potential risks from climate related regulation. First, regulated utilities may pass on increased costs to energy consumers and second, regulation requiring more stringent building energy efficiency standards could increase project implementation costs.</p> <p>With over 300 global properties the company also faces physical risks from extreme weather events. To mitigate that risk the company has emergency and business continuity plans in place which include weather tracking and recovery steps.</p> <p>Simon Property also notes that increasing interest in sustainability on the part of its tenants and shoppers could pose a business risk if Simon Property is perceived to not be responding to market interests.</p>

# SIMON PROPERTY GROUP, INC.

**Public Policy** Simon Property Group is a member of the Energy and Environmental Advisory Committee of the Real Estate Round Table (RERT), an industry group that addresses national policy. The Energy and Environmental Advisory Committee works to influence the debate on federal climate change legislation.

## Emissions Accounting

**Score: 9**

*GHG Emissions Inventory*    **Year:** 2007    **Facility/Region:** Global    **Protocol:** GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)	
<b>Scope 1 (Direct)</b>	<b>23,883*</b>	* US properties only excluding the Chelsea outlet division
<b>Scope 2 (Indirect –Electricity)</b>	<b>708,660*</b>	** Business travel and employee commuting
<b>Scope 3</b>	—	
<b>Travel</b>	<b>14,090**</b>	
<b>Logistics</b>	—	
<b>Products</b>	—	
<b>Supply Chain</b>	—	

**Accounting Methods** Simon Property uses the operational control approach for its organizational boundary. The company uses meters to track energy use at its properties in five categories: (1) a mall’s inside common area, (2) a mall’s outside common area, e.g., parking lots, (3) landlord-provided heating and cooling to tenants, (4) parking garages, and (5) electricity made available to tenants for their use. Of these categories, the fifth category, electricity made available to tenants is outside of Simon Property Group’s direct control, is excluded from the company’s GHG Inventory.

Scope 1 emission sources include all on-site combustion and fleet emissions from owned vehicles. Scope 2 emissions are attributable to purchased electricity. Scope 3 emissions are an estimate of employee commuting and business travel.

Business travel emissions were calculated by using flight distance data from the corporate travel system in accordance with the WRI CO<sub>2</sub> Emissions from Business Travel Version 2.0. Emissions factors according to length of flight were applied to the sum of total passenger kilometers traveled. Emissions factors vary by length of flight as follows. Short-Haul Flights: Less than 500 km (150 g CO<sub>2</sub>/passenger-km), Medium Haul Flights: Between 500 km and 1600 km (119.4 g CO<sub>2</sub>/passenger), and Long-Haul Flights: Greater than 1600 km (110 g CO<sub>2</sub>/passenger-km).

Simon Property surveyed its employees and determined that an average commuting distance is approximately 10 miles, one way. For a 250-day work year an estimate of a 20-mile round trip commute was used for each of the 5561 employees. An average fuel economy factor for US passenger cars of 23 mpg for a medium-gas automobile was then applied in accordance with WRI Mobile Combustion CO<sub>2</sub> Emissions Calculation Tool. June 2003 Version 1.2.

# SIMON PROPERTY GROUP, INC.

*External Verification* Simon's Property plans to have its data reviewed by a third party in the future.

*Certified CO<sub>2</sub> Offsets* None identified.

## Strategic Planning

**Score: 11**

*Emissions Reduction Targets* None identified.

*Target Details* The company sets annual energy reduction targets for properties under its operational control, but details are not provided. Simon says in its CDP6 response that it is working on potential long-term energy intensity goals measured in energy use per square foot. Simon Property has not set GHG emissions reduction targets.

*Target Achievement* The company has reduced absolute energy use at properties under operational control by 9.7 percent between 2003 and 2007.

*Energy Efficiency* None identified.

*Renewable Energy* None identified.

*Emissions Trading* None identified.

*Products & Services* Simon Property views growing demand for sustainability features by its tenants and their stakeholders as a profitable business opportunity and it has begun discussions with key tenants about incorporating such features in its malls. Simon Property has determined that with regard to building construction, the USGBC's LEED Core and Shell certification of its own developments provides between 30 to 50 percent of the points a tenant would require for its space to attain LEED for Commercial Interiors certification. With regard to building operation, the company helps tenants improve energy efficiency by installing meters so that tenants financially benefit from their own investments in energy conservation through lower utility costs.

Simon Property has also made investments in energy efficiency for its properties' general operation which reduce cost and enhance franchise value. The result has been approximately \$12 million annually in operating cost savings. First in 2004 the company challenged property managers to reduce energy costs through an Energy Best Practices Program which also includes web-based energy reporting tools. Managers, their supervisors and Simon Property management use the tools to view and benchmark energy use and costs in real time. Best practices include controlling hours of lighting in public areas such as parking lots and mall common areas, and optimizing HVAC systems. In 2005 the company updated its metering infrastructure and data delivery system, which is also used to measure and verify the impact of energy efficiency projects. That same year it enhanced remote monitoring of mall energy management systems and the following year it implemented quarterly remote reviews of the Systems.

Simon Property takes advantage of tax credits and utility incentives to implement its energy efficient projects. In addition, the company has entered into relationships with performance contracting firms. Performance contracting bundles several energy efficiency improvements into one project which means that projects with both short and long payback periods can be implemented.

## SIMON PROPERTY GROUP, INC.

The company reduces development costs by using incentives that roughly 20 US jurisdictions currently offer for sustainable buildings including priority in building permit processing and plan review, increased floor-to-area ratios, and property tax abatements. Finally, Simon Property works with property insurance companies that are developing climate change risk-adjusted pricing for their offerings in order to position itself to quickly adapt design and operating practices if needed to take advantage of such offerings.

Simon Property is also investigating solar power and other renewable energy purchases.

Collaborating with US EPA's Energy Star program, Simon Property is helping develop energy use benchmarks for shopping malls. The company believes that the benchmarks will be critical in an eventual cap-and-trade system to manage carbon emissions.

<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	None identified.

CBRE stepped up its sustainability efforts in 2007 with a new Global Director of Environmental Strategy, an environmental stewardship policy, a carbon neutrality target for the office buildings it occupies by 2010, an employee accreditation and education program and client offerings especially through its Asset Services business. Asset Services set a target to reduce energy use in the buildings it represents by 10 percent in 2008. In recognition of its efforts CBRE was named Energy Star Partner of the Year in 2007 and 2008 by the US EPA. The company did not comment on this profile by deadline.

**Summary Score: 37**

## Company Information

CB Richard Ellis is the largest global real estate services firm by revenue. The company operates through its wholly owned subsidiaries and affiliates, which managed over 1.9 billion square feet of property as of December 2007. Company services include advice and execution for property sales and leasing, corporate services, property, facilities and project management, mortgage banking, appraisal and valuation, development services, investment management and research and consulting. Clients include real estate owners, occupiers, investors and developers. CBRE employs over 29,000 people worldwide.

### Contact Information

**Chairman:** Richard C. Blum

**CEO:** Brett White

**Website:** [www.cbre.com](http://www.cbre.com)

**Address:** 11150 Santa Monica Blvd., Suite 1600 Los Angeles, CA, 90025, United States

## Board Oversight

**Score: 3**

### Board Committee/Member

None identified.

### Board Role

The board has ultimate responsibility for corporate responsibility initiatives outlined in the FY07 corporate responsibility report which includes climate-related initiatives.

### Board Training

None identified.

## Management Execution

**Score: 11**

### CEO Leadership

CBRE's Environmental Stewardship Policy, which includes a carbon neutrality target, was approved in principle by CEO Brett White before being finalized and launched in May 2007. In his letter in the 2007 Annual Report, White notifies shareholders that the company has set a target to become carbon neutral by 2010. In the 2007 Corporate Responsibility Report White states, "By aggregating and sharing our expertise in green building policies, processes and procedures, we can make a tangible impact on improving energy efficiency, reducing greenhouse gas emissions and slowing climate change. I believe this effort is not only the right thing to do as stewards of our global resources, but will yield dividends for our clients, employees and shareholders."

In a 2007 press release announcing the carbon neutrality target and plans to engage with clients on energy and GHG emissions, CEO White said "Our clients are driving toward energy savings and solid sustainable environmental performance. We see a great opportunity to

# CB RICHARD ELLIS GROUP, INC.

partner with them to improve their operational environmental performance and help protect the climate at the same time.”

## *Company Strategy*

In 2007 the company launched its Environmental Stewardship Policy and created a global taskforce composed of business leaders from across CBRE to make recommendations regarding sustainability. CBRE also hired Sally Wilson in 2007 to be the Global Director of Environmental Strategy. CBRE plans to reduce its climate change impact by reducing the GHG emissions from its own operations, educating its employees on energy use, and offering clients a range of sustainable building management, financing and advisory services.

## *Executive Responsibility*

Sally Wilson is the Global Director of Environmental Strategy. She works with, and was hired at the recommendation of a global taskforce of CBRE business leaders who make sustainability recommendations.

## *External Initiatives*

None identified.

## *Employee Training*

CBRE surveyed its US offices in November 2007 to determine what actions each office takes to conserve and recycle resources such as energy, water and paper. CBRE shared the survey results with its management and employees. Additional surveys are planned and information sharing will allow offices to adopt and share best practices.

CBRE launched an employee accreditation and education program in 2007. Employees are encouraged to attain the accreditation most relevant for their job and market. In Australia the Green Building Council of Australia offers Green Star Accreditation and Australian Building Greenhouse Rating accreditation. In the US, through the USGBC's Portfolio Program employees could become a LEED Accredited Professional. In 2007 CBRE hosted 7 LEED AP training sessions for 300 employees.

The Asset Services business will require most employees to take a Building Owners and Managers Association three-year energy efficiency program known as BEEP. The company is negotiating with BOMA to license the training and is training employees to become internal BEEP trainers.

## *Executive Compensation*

None identified.

## Public Disclosure

Score: 4

### *Annual Report*

CBRE states in its 2007 Annual Report that because buildings are responsible for an estimated 40 percent of world GHG emissions it has decided to become carbon neutral for its own operations and will help clients implement energy efficiency programs at properties managed by CBRE.

### *Securities Filings*

No climate change mention.

### *Other Disclosure*

CBRE issued its first Corporate Responsibility report which details its FY07 progress on environmental stewardship among other matters. The report discusses the plan for CBRE to reduce or otherwise offset GHG emissions from its operations, to train its employees on energy use, and to offer clients energy management and related green building advisory and financial services.



# CB RICHARD ELLIS GROUP, INC.

**Sustainability Report:** *The Universal Values of CBRE: 2007 Corporate Responsibility Report*, April 2008.

**URL:** [http://www.cbre.com/NR/rdonlyres/BA70BED7-1D66-4827-BD37-8B2DB6471762/0/Corporate\\_Responsibility\\_Report\\_FINAL.pdf](http://www.cbre.com/NR/rdonlyres/BA70BED7-1D66-4827-BD37-8B2DB6471762/0/Corporate_Responsibility_Report_FINAL.pdf)

**GRI Accordance:** G3 Application Level C

*Carbon Disclosure Project* Answered Questionnaire (Not Public)

*Public Policy* None identified.

## Emissions Accounting

Score: 0

*GHG Emissions Inventory* CBRE retained ICF International to assist it in conducting its first GHG emissions inventory, scheduled to be completed by the second quarter of 2008.

*Certified CO<sub>2</sub> Offsets* CBRE will purchase offsets if necessary to reach its 2010 carbon neutral target.

## Strategic Planning

Score: 19

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions</b>	<b>Carbon Neutral</b>	—	<b>2010</b>	<b>Global</b>
<b>Energy Use</b>	<b>5%</b>	<b>2007</b>	<b>2008</b>	<b>United Kingdom</b>
<b>Energy Use</b>	<b>10%</b>	—	<b>2008</b>	<b>CBRE Asset Services building portfolio</b>

*Target Details* In May 2007, the company announced that it has set a target to become carbon neutral for the buildings it occupies by 2010. CBRE's London offices are ISO 14001 certified, and in the process of achieving the certification the company developed an energy management plan for each site and set a target to reduce energy use by 5 percent for 2008. Beyond its own operations, CBRE Asset Services has set a target to reduce energy use by at least 10% in the buildings that it represents.

*Target Achievement* None identified.

*Energy Efficiency* CBRE conducted a survey of its US operations in 2007 which revealed that 86 percent encourage employees to turn off electronics when not in use, 83 percent have a procedure to ensure lights are turned off each night and 59 percent check that thermostats are operating at energy conserving levels. The London offices have installed energy efficiency lighting to help meet its energy reduction target. CBRE received a Gold certification from LEED for Commercial Interiors for its Washington DC office building in 2007.

The company's UK offices have a Cycle to Work program which includes savings on bike costs and cyclist-friendly facilities. The offices also offer an interest free loan to be used toward the purchase of public transportation passes.

*Renewable Energy* Once the GHG emissions inventory is complete the company will establish a baseline and determine the steps it will take to reach its carbon neutral target. CBRE says it will purchase

## CB RICHARD ELLIS GROUP, INC.

renewable energy where it is economically feasible. CBRE's 2007 World Conference was carbon neutral. Green power for the conference was donated by Bull Frog Power and more than 3,000 attendees made financial contributions to offset their attendance.

*Emissions Trading* CBRE states that its Europe, Middle East and Africa divisions are "following the Kyoto Protocol" but it is not clear if this indicates that the company owns or operates facilities regulated under the EU ETS or if it voluntarily participates in emissions trading.

*Products & Services* CBRE established the Sustainability Practice Group, led by Sally Wilson, to develop green real estate strategies. The Group intends to offer the following client services: consultation, benchmarking and research services, project management, equity participation, LEED Existing Building financing and conversion, leasing and marketing for LEED projects, sustainable site selection and acquisition, education programs, transaction management and financial analysis.

CBRE Asset Services helps property owners and tenants with resource management including waste, water and energy through a program termed *Sensible Sustainability*. Asset Services set a target to reduce energy use in the buildings in its global management portfolio by at least 10 percent in 2008. It was also targeting buildings 100,000 square feet or larger for a building-specific energy use reduction of 10 percent through the *Greenenergy* program which uses Energy Star. In 2008 Asset Services launched its *Standards of Sustainability*, a 12-point commitment for all office buildings. The Standards are publicly available on the company website and include registering, benchmarking and pursuing EPA Energy Star certification and preparing a sustainability plan that will incorporate capital expenditure requests to discuss with the client for the 2009 budget preparations.

The company also enrolled 100 US office buildings in the USGBC's Portfolio Program which entails working for LEED certification.

CBRE's EMEA Global Corporate Services Energy and Sustainability group helped develop the Investment Property Databank Environment Code, which are guidelines to help corporate building occupiers measure, manage and interpret their real estate environmental data.

CBRE was named Energy Star Partner of the Year in 2007 and 2008 by the US EPA for its efforts in helping clients reduce building energy use.

*Research & Development* None identified.

*Supply Chain Management* None identified.

# BROOKFIELD ASSET MANAGEMENT INC.

TORONTO STOCK EXCHANGE – BAM.A  
Real Estate

Brookfield Asset Management has not made public a formal strategy to address the risks and opportunities posed by climate change. There is no evidence of board or executive leadership with respect to climate change, and the company has not set greenhouse gas (GHG) emission reduction targets. However, subsidiary Brookfield Properties has an energy plan and a 30 percent energy use reduction target for properties in its portfolio. In addition, the subsidiary set a target to increase the portfolio's average Energy Star score to an 80 (out of 100 possible points). The company did not comment on this profile by deadline.

**Summary Score: 27**

## Company Information

Brookfield Asset Management is a global asset manager with \$95 billion in assets under managements, primarily in power, property, timber, infrastructure and specialty funds. Brookfield is headquartered in Toronto, Canada and employees more than 10,000 people globally.

### Contact Information

**Chairman:** Marcel R. Coutu

**CEO:** Bruce Flatt

**Website:** [www.brookfield.com](http://www.brookfield.com)

**Address:** Brookfield Place, Suite 300, 181 Bay Street, Toronto, ON, M5J 2T3, Canada

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None Identified.

## Management Execution

**Score: 5**

*CEO Leadership* None Identified.

*Company Strategy* Brookfield Asset Management does not have a formal climate change strategy although the 2007 annual report states that management and the board commit to taking current and future environmental considerations into account. Subsidiary Brookfield Property has an energy program for properties within its portfolio. Known as BEST or *Bringing Energy Savings to our Tenants*, the program incorporates energy audits, tenant education and implementation of energy projects. Brookfield Property has also set an energy reduction target for 2012 as part of its commitment to BOMA's *Market Transformation Energy Plan and 7-Point Challenge* on energy and green buildings.

*Executive Responsibility* None identified.

*External Initiatives* The company is involved in the following external initiatives: Canadian Green Building Council; US Green Building Council; Business Owners and Managers Association *Market Transformation Energy Plan and 7-Point Challenge*.

*Employee Training* None identified.

*Executive Compensation* None identified.

# BROOKFIELD ASSET MANAGEMENT INC.

## Public Disclosure

Score: 2

<i>Annual Report</i>	The 2007 Annual Report includes a brief section on sustainable development which mentions that the company's office properties have energy saving features and the newest office development in Toronto will be certified to the LEED Gold Standard. The report also notes that the company has a renewable energy business with a focus on hydroelectric and wind power generation.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	None identified. Brookfield Asset Management does not publish a sustainability report.
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Not Public)
<i>Public Policy</i>	None identified.

## Emissions Accounting

6

*GHG Emissions Inventory*    **Year:** None identified    **Facility/Region:** Brookfield Property    **Protocol:** GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)	
Scope 1 (Direct)	—	*Brookfield Property US and Canada real estate portfolio only
Scope 2 (Indirect –Electricity)	862,580*	
Scope 3	—	
Travel	—	
Logistics	—	
Products	—	
Supply Chain	—	

<i>Accounting Methods</i>	Brookfield Property used the GHG Protocol Calculation Worksheet for version 1.2 for indirect CO <sub>2</sub> emissions from the consumption of purchased electricity, heat and/or steam.
<i>External Verification</i>	None identified.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

# BROOKFIELD ASSET MANAGEMENT INC.

## Strategic Planning

Score: 14

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
Energy Use	30%	—	2012	Brookfield Properties real estate portfolio

### Target Details

Brookfield Asset Management has not set GHG emissions or energy targets, however subsidiary Brookfield Property has set energy targets for its real estate portfolio. Brookfield Property works with the Building Owners and Managers Association (BOMA) in Canada and it has accepted BOMA's 7-point challenge which includes a target of reducing energy use across its real estate portfolio by 30 percent by 2012. Brookfield Property has also set a target to increase the portfolio's average Energy Star score from a 72.5 to an 80 by the end of 2008.

### Target Achievement

None identified.

### Energy Efficiency

None identified.

### Renewable Energy

None identified.

### Emissions Trading

None identified.

### Products & Services

Subsidiary Brookfield Property has an energy program for properties within its portfolio. Known as BEST or *Bringing Energy Savings to our Tenants*, the program incorporates energy audits, tenant education and implementation of energy projects.

Brookfield Property also states that all future developments will be built to the LEED Gold Standard. The company is pursuing LEED Existing Building certification for some current properties, and some of its employees are seeking LEED accreditation.

Through BOMA's 7-Point Challenge, the subsidiary has committed to reducing energy use by 30 percent by 2012, and to benchmark energy performance annually with Portfolio Manager, the US EPA Energy Star benchmarking tool. Brookfield has begun benchmarking and 10 percent of its properties have earned the Energy Star label. The subsidiary hopes to increase this to 35 percent by the end of 2008 and 80 percent by the end of 2009. The 7-Point Challenge also asks endorsers to perform energy audits, retrofit buildings and educate building managers on equipment operation. In addition endorsers commit to position themselves as leaders in building environmental and energy operation and management.

### Research & Development

None identified.

### Supply Chain Management

None identified.

# GENERAL GROWTH PROPERTIES, INC.

NEW YORK STOCK EXCHANGE – GGP  
Real Estate

General Growth Properties has not made public a formal strategy to address the risks and opportunities posed by climate change. There is no evidence of board or executive leadership with respect to climate change, and the company has not set greenhouse gas (GHG) emission reduction targets. However, General Growth has implemented energy conservation measures at properties within its portfolio. Heating and cooling equipment replacement has reduced energy use in the overall portfolio by 17 percent and by up to 32 percent at some properties. The company did not comment on this profile by deadline.

**Summary Score: 16**

## Company Information

Founded in 1954, General Growth Properties is now a publicly traded real estate investment trust (REIT) that acquires, develops, renovates and manages properties in the United States. Properties include shopping malls, community centers and mixed use development. General Growth Properties is headquartered in Chicago, Illinois and it employs 4,200 people nationwide.

### Contact Information

**Chairman/CEO:** John Bucksbaum

**Website:** [www.ggp.com](http://www.ggp.com)

**Address:** 110 N. Wacker Drive, Chicago, Illinois, 60606, United States

## Board Oversight

**Score: 0**

<i>Board Committee/Member</i>	None identified.
<i>Board Role</i>	None identified.
<i>Board Training</i>	None Identified.

## Management Execution

**Score: 2**

<i>CEO Leadership</i>	None Identified.
<i>Company Strategy</i>	General Growth Properties does not have a formal climate change strategy to reduce the climate change impact from its own operations. However, the company has identified energy efficiency as one of its three main areas of impact in terms of sustainability. The company website describes energy conservation measures taken at unspecified properties within its portfolio. Measures include design features, lighting and equipment upgrades and testing of on-site solar energy.
<i>Executive Responsibility</i>	None identified.
<i>External Initiatives</i>	None identified.
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	None identified.

# GENERAL GROWTH PROPERTIES, INC.

## Public Disclosure

Score: 7

<i>Annual Report</i>	In the 2007 annual report, General Growth Properties says that it employs a “quiet approach” to energy conservation whereby customers do not notice the energy efficient lighting, heating and cooling systems, white painted rooftops and design features that maximize natural light and reduce energy use.
<i>Securities Filings</i>	In the risk factor section of the 2007 Form 10-K, General Growth Properties states that its coastal properties could be vulnerable to sea level rise, hurricanes and storms whether or not such events are caused by global climate change.
<i>Other Disclosure</i>	None identified. General Growth Properties does not publish a sustainability report.
<i>Carbon Disclosure Project</i>	No response.
<i>Public Policy</i>	None identified.

## Emissions Accounting

Score: 0

<i>GHG Emissions Inventory</i>	None identified.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score: 7

<i>Emission Reductions Targets</i>	None identified.
<i>Target Details</i>	None identified.
<i>Target Achievement</i>	None identified.
<i>Energy Efficiency</i>	None identified.
<i>Renewable Energy</i>	None identified.
<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	<p>To reduce energy consumption at portfolio properties, the company employs reflective, white-painted rooftops and building designs that maximize natural light. Cleaning is done during the daytime to reduce the need for nighttime lighting. At 95 percent of regional malls there is an energy management system and individual properties have site-specific energy savings checklists.</p> <p>In 2007 the company implemented a lighting retrofit program. There is also a program to upgrade heating and cooling equipment which has reduced equipment use in the company portfolio by 17 percent overall, and by up to 32 percent at certain properties.</p> <p>To reduce direct fuel use, the security fleet uses bicycles and open air vehicles in part, and the company is testing the use of hybrid vehicles. Finally, the company is testing on-site solar power at properties in Hawaii and has a plan to do the same in California.</p>
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	None identified.



# BOSTON PROPERTIES, INC.

NEW YORK STOCK EXCHANGE – BXP  
Real Estate

Boston Properties has not made public a formal strategy to address the risks and opportunities posed by climate change. There is no evidence of board or executive leadership with respect to climate change, and the company has not set greenhouse gas (GHG) emission reduction targets. However, in the 2007 Form 10-K, the company includes a discussion of energy efficiency capital improvements taken at unspecified properties in its portfolio. The company says it educates tenants on energy conservation and it operates a shuttle service at some sites to encourage greater use of mass transit. The company did not comment on this profile by deadline.

**Summary Score: 16**

## Company Information

Founded in 1970, Boston Properties acquires, develops and manages properties, mainly Class A office buildings and suburban office parks. The company has a large presence in Boston, Washington DC, midtown Manhattan and San Francisco. Its strategy is to focus on supply-constrained markets where there are considerable barriers to entry. The company has 139 properties in its portfolio and approximately 660 employees as of December 31, 2007.

### Contact Information

**Chairman:** Mortimer B. Zuckerman  
**CEO:** Edward H. Linde

**Website:** [www.bostonproperties.com](http://www.bostonproperties.com)

**Address:** Prudential Center, 800 Boylston Street, Suite 1900, Boston, Massachusetts, 02199-8103, United States

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None Identified.

## Management Execution

**Score: 3**

*CEO Leadership* None Identified.

*Company Strategy* Boston Properties does not have a formal climate change strategy. In the 2007 Form 10-K it does describe energy conservation measures taken at unspecified properties within its portfolio.

Each year property managers identify measures that could reduce energy or other resource consumption. Senior management then reviews each capital improvement or other measure and determines which ones meet Boston Properties' investment criteria and also offer material energy or other resource savings. The company intends to undertake this exercise annually.

*Executive Responsibility* None identified.

*External Initiatives* None identified.

# BOSTON PROPERTIES, INC.

*Employee Training* None identified.

*Executive Compensation* None identified.

---

## Public Disclosure

**Score: 4**

*Annual Report* In the 2007 annual report Boston Properties highlights its property in Waltham, Massachusetts, which is pre-LEED certified.

*Securities Filings* In the 2007 Form 10-K, Boston Properties lists general energy efficiency measures taken throughout its property portfolio. The company also states that some of its properties are US EPA Energy Star labeled, and it lists several that are pre-LEED certified, or for which the company will apply for pre-LEED certification.

*Other Disclosure* None identified. Boston Properties does not publish a sustainability report.

*Carbon Disclosure Project* No response.

*Public Policy* None identified.

---

## Emissions Accounting

**Score: 0**

*GHG Emissions Inventory* None identified

*Certified CO<sub>2</sub> Offsets* None identified.

---

## Strategic Planning

**Score: 9**

*Emissions Reduction Targets* None identified.

*Target Details* None identified.

*Target Achievement* None identified.

*Energy Efficiency* None identified.

*Renewable Energy* None identified.

*Emissions Trading* None identified.

*Products & Services* Property managers annually identify potential energy conservation projects that are then submitted to senior management for review. Projects that meet the company's investment criteria and also offer material energy or other resource savings are implemented. During 2007 property improvements made include installing energy efficient lighting, motors, chillers, other HVAC components, solar reflective window film and replacing or upgrading energy management systems. Projects have also included installing CO<sub>2</sub> emissions controls.

Boston Properties benchmarks building energy consumption and uses the results to train property managers and tenants alike. The company educates its tenants on energy conservation and energy codes. It has cooperated with some tenants to restrict HVAC system service to weekdays only, unless otherwise requested. The company also encourages the use

## BOSTON PROPERTIES, INC.

of mass transit by providing a shuttle service between some of its properties and local bus and subway systems.

The company states that it has several buildings that have earned the US EPA Energy Star label. The buildings are not identified. Boston Properties also has three properties that are pre-certified to receive a gold or silver LEED rating through the US Green Building Council, one each in New York, Maryland and Massachusetts. The company will apply for pre-LEED certification on two other properties and plans to determine if it is economically feasible to seek LEED certification for each new development. Boston Properties also seeks LEED certification when a tenant renovates or builds out existing space.

<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	None identified.

Starbucks has identified climate change as key priority for the company and is in the third year of implementing its climate change strategy. The company has committed to significant renewable energy purchases for its stores and has also focused on ways to improve energy efficiency through store design. Starbucks also believes it has a role to play in consumer education and awareness, and is beginning to engage its supply chain partners on climate-related issues, such as renewable energy.

**Summary Score: 52**

## Company Information

The world's top specialty coffee retailer, Starbucks has more than 16,000 coffee shops in 44 countries. Starbucks owns more than 8,500 of its shops, mostly in the US. The company also owns the Seattle's Best Coffee and Torrefazione Italia coffee brands. In addition, Starbucks markets its coffee through grocery stores and licenses its brand for other food and beverage products. As of September 28, 2008, Starbucks had approximately 176,000 employees.

### Contact Information

**Chairman/CEO:** Howard D. Schultz

**Website:** [www.starbucks.com](http://www.starbucks.com)

**Address:** 2401 Utah Ave. South, Seattle, WA 98134, United States

## Board Oversight

**Score: 3**

### Board Committee/Member

None identified.

### Board Role

Starbucks' Board of Directors periodically reviews the goals and results of the company's Corporate Social Responsibility Executive Committee, including matters related to climate change. This committee is comprised of both senior executives and board members.

### Board Training

None identified.

## Management Execution

**Score: 14**

### CEO Leadership

Chairman and CEO Howard Schultz states in his introductory letter to the Fiscal 2007 Corporate Social Responsibility Annual Report, "Another priority is to develop and implement a global environmental strategy for our business. The changes we will make will focus on decreasing our carbon footprint as we grow."

### Company Strategy

In fiscal 2005, the Starbucks Emerging Issues Council, a group of 18 senior Starbucks executives, prioritized climate change as a key issue for the company in response to the environmental threats facing coffee-growing communities. The Council also approved the company's emissions reduction strategy. Starbucks says that the Council will also be involved in determining what further measures are needed for the company to proactively and responsibly address the issue of climate change in a leadership capacity.

To start, Starbucks has developed a three-year climate change mitigation strategy which includes the following steps to reduce the company's Scope 1 and Scope 2 emissions:

- purchasing renewable energy;
- focusing on energy conservation measures;
- educating and advocating the need for collaborative action

# STARBUCKS CORP.

<i>Executive Responsibility</i>	Starbucks' Corporate Social Responsibility Executive Committee has overall responsibility for climate change issues and determines priorities for addressing the company's climate footprint. The CSR Executive committee, which is headed by Chairman and CEO Howard Schultz, is comprised of senior Starbucks executives as well as several board members. One of the committee's two key priorities for 2007 was creating an initiative to achieve high-performance green stores, with specific attention on energy consumption. For fiscal 2008, Starbucks is exploring a new organizational structure that will more deeply integrate CSR into its business operations.
<i>External Initiatives</i>	Starbucks participates in the following external initiatives: World Resources Institute's Green Power Market Development Group; The Climate Group and Global Green USA.
<i>Employee Training</i>	Starbucks encourages its employees, referred to internally as partners, to be environmentally responsible both at work and home. Starbucks launched a website encouraging employees to calculate their own carbon footprints and offering options to purchase carbon offsets. The company also piloted an initiative in fiscal 2007 to provide a selection of store managers with report cards on their store's energy and water usage. A second pilot program is scheduled for 2008. For the past five years Starbucks has celebrated Earth Day for the month of April with a series of employee and customer awareness events.
<i>Executive Compensation</i>	None identified.

## Public Disclosure

Score: 7

<i>Annual Report</i>	The introduction to Starbucks' fiscal year 2006 Annual Report states: "We also decreased the environmental impact of our coffeehouses by purchasing renewable energy certificates to offset 20 percent of the energy used in our US and Canada company-operated stores."
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	Starbucks' fiscal 2007 CSR report covers the company's US and Canada company-operated retail and global supply chain operations. The company conducted a materiality assessment to determine issues of importance to both external stakeholders and the company. In addition to other issues identified as being material, Starbucks highlights climate change, energy consumption and paper cups as three material environmental areas.  <b>Sustainability Report:</b> <i>Fiscal 2007 Corporate Social Responsibility Annual Report, May 2008</i> <b>URL:</b> <a href="http://www.starbucks.com/aboutus/csreport/csr.htm">http://www.starbucks.com/aboutus/csreport/csr.htm</a> <b>GRI Accordance:</b> Self-declared GRI Application Level B+
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	Starbucks says in its most recent CDP response: "We concur with the scientific opinion that climate change could be an enormous threat to the future of our planet and that meaningful action must be taken to reduce GHG emissions." The company anticipates that regulatory responses to climate change will initially raise energy costs, while severe weather conditions could impact the livelihoods of coffee-growing communities. Starbucks also sees climate change increasingly driving consumer purchasing decisions.

# STARBUCKS CORP.

**Public Policy** On November 19, 2008, Starbucks joined with four other US companies and Ceres to launch a new business coalition calling for strong US climate and energy legislation in early 2009 to spur the clean energy economy and reduce GHG emissions. The Business for Innovative Climate and Energy Policy (BICEP), whose founding members also include Levi Strauss & Co., Nike, Sun Microsystems and The Timberland Company, was launched to emphasize the importance of addressing climate change across all sectors of the economy. The group's key policy recommendations include stimulating renewable energy, promoting energy efficiency and green jobs, requiring 100 percent auction of carbon allowances, and limiting new coal-fired power plants to those that capture and store carbon emissions.

Starbucks says in its climate change strategy statement (available in the company's latest CSR report), "We continue to believe that governments, organizations and individuals have a shared responsibility to take meaningful action to reduce GHG emissions." While the company has not taken a specific stance on future public policy options, in 2007 Starbucks placed three full-page advertisements in the *New York Times* that promoted the need for collective action on climate change.

## Emissions Accounting

Score: 7

GHG Emissions Inventory

Year: 2003

Facility/Region: North American operations

Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	56,000
Scope 2 (Indirect –Electricity)	239,000
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

**Accounting Methods** In 2004, Starbucks conducted an inventory of its 2003 emissions from company-operated retail stores (North American only), coffee roasting, administrative operations and distribution network. The company plans to update the inventory for its 2008 CSR report and include global emissions for sources under direct control.

**External Verification** Moss Adams LLP (Seattle, Washington USA) verifies the information provided in Starbucks' annual Corporate Social Responsibility Report.

**Certified CO<sub>2</sub> Offsets** See Renewable Energy below.

## Strategic Planning

Score: 21

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
Energy Use	25%	2008	2010	Company-operated and international stores
Renewable Energy	50%	—	2010	All stores

### Target Details

Starbucks has established a set of long-term goals that the company believes will enable continued growth without increasing its carbon footprint beyond 2007 levels. These include:

- In 2008 and 2009, build four test stores in different regions around the world to evaluate the latest technologies designed to reduce energy and water use.
- By 2010, reduce in-store energy use by 25 percent in all company-operated and international stores.
- By 2010, source 50 percent of our store energy from certified renewable sources.
- By 2010, certify all company-operated stores using the US Green Building Council and international equivalents.
- By 2010, incorporate green building standards into all new building construction.

### Target Achievement

None identified.

### Energy Efficiency

Starbucks energy efficiency efforts are largely focused on improving the environmental design of its stores as well as employee commuting programs. In fiscal 2007, the company increased the standard store thermostat setting to conserve energy and installed new equipment at its Kent, Washington roasting plant to reduce natural gas consumption. Starbucks has also worked collaboratively with the US Green Building Council for several years on developing retail sector standards and a LEED certification program for portfolio-wide applications. Starbucks is currently working on the final application for its "volume certification" prototype, anticipated to be completed in 2008. In addition, the company's headquarters in Seattle, Washington has received LEED-Existing Building Gold certification. The company is also planning to build a new office building in Seattle and a roasting plant in Columbia, South Carolina in accordance with the LEED Silver standard, targeted to be completed in 2009. Finally, in 2007, Starbucks also initiated a six-month comprehensive energy audit of its stores in the US, with results currently being evaluated.

Starbucks also supports a Transportation Options Program that provides subsidies to employees at the company headquarters in Seattle, Washington to use public transportation and alternatives such as biking and carpooling. In fiscal 2007, approximately 37 percent of employees participated in the program. Starbucks also contracts with Zipcar, a car-sharing network that provides vehicles for employees.

### Renewable Energy

Because the energy used to power Starbucks' retail stores contributes the largest portion of the company's total greenhouse gas (GHG) emissions (81 percent in the 2003 footprint), Starbucks believes investing in renewable energy is the most effective means to offset its emissions and is a member of the US EPA Green Power Partnership. In 2005, Starbucks purchased enough renewable wind energy, using renewable energy certificates (RECs),



to match five percent of the energy needed to power company-operated stores in North America. In fiscal 2007, Starbucks purchased 185,000 MWh worth of RECs, ranking Starbucks 10th overall among other EPA Green Power Partners, and among the largest in the food services sector. This represents 20 percent of the company's North American retail store electricity consumption. Starbucks was also recognized by the US EPA with the Green Power Partner of the Year award in 2006.

*Emissions Trading* Starbucks does not engage in emissions trading at this time.

*Products & Services* Starbucks says that growing consumer concern around climate change gives the company an opportunity to engage its customers regarding their ability to mitigate GHG emissions through their daily choices. While this does not create opportunities for new products or services, Starbucks believes that it can have a large impact through marketing messages to consumers, as well as through protecting global coffee-growing communities from climate change impacts.

In fiscal 2007, Starbucks launched Planet Green Game, an interactive, educational online game that informs individuals about climate change. The company also hosted a "National Day of Discussion: Solutions to Climate Change" at 48 stores across the US.

*Research & Development* None identified.

*Supply Chain Management* Starbucks has established a comprehensive sustainable supply chain strategy through cooperation with Conservation International and other partners. In fiscal 2004, Starbucks introduced the Coffee and Farmer Equity (C.A.F.E.) Practices criteria. While these criteria primarily focus on issues of social and economic responsibility, they do include guidelines for coffee farmers to conserve water and energy use. In 2007, Starbucks introduced a new scorecard for C.A.F.E. Practices and launched an online reporting system for verification organizations to submit reports. Starbucks works with Scientific Certification Systems (SCS) to oversee the verification system.

Starbucks has also begun to engage its supply chain on climate change mitigation issues. In 2007, the company reached out to 387 of its largest suppliers in the US encouraging them to purchase renewable energy certificates (RECs) through the company's preferred rate contract. While only 11 suppliers took advantage of the opportunity, it is an innovative model for large purchasers of renewable energy to multiply the effects of their commitment along the supply chain and grow overall demand for renewables.

In terms of packaging, in 2006, Starbucks introduced hot beverage paper cups containing 10 percent post-consumer fiber in its US and Canada stores. These cups reduce the wood needed as a raw material as well as the energy used to produce them. In fiscal 2007, Starbucks also began a lifecycle assessment of polylactid (PLA) plastic resin, an alternative material made from corn that the company is considering using in cold beverage cups.

McDonald's has called its restaurants "laboratories of green experimentation" as the company introduces different environmental initiatives suitable to different local markets across the world. A first step for the company is to measure and manage electrical energy use at its restaurants. The company has focused on unifying its energy efficiency policies and sharing best practices across franchises. However, McDonald's has not yet completed a comprehensive greenhouse gas (GHG) emissions inventory or set emissions reduction targets.

**Summary Score: 26**

## Company Information

McDonald's is the world's leading global foodservice retailer with more than 31,000 restaurants in almost 120 countries. More than 75 percent of McDonald's restaurants are owned and operated by independent franchisees or affiliates. As of 2007, the company had approximately 390,000 employees.

### Contact Information

**Chairman:** Andrew J. McKenna Sr.

**CEO:** James A. Skinner

**Website:** www.mcdonalds.com

**Address:** 2111 McDonalds Drive, Oak Brook, IL 60523, United States

## Board Oversight

**Score: 2**

### Board Committee/Member

Corporate Responsibility Committee

### Board Role

The Corporate Responsibility Committee acts in an advisory capacity to the Board of Directors and management with respect to policies and strategies that affect the company's role as a socially responsible organization, including oversight on environmental matters. Specific oversight of climate change issues was not mentioned in the committee's charter.

### Board Training

None identified.

## Management Execution

**Score: 3**

### CEO Leadership

None identified.

### Company Strategy

McDonald's first issued an environmental policy statement, "Our Commitment to the Environment", in 1990 with an update in 2003. The company includes the following statement on climate change in its 2008 Worldwide Corporate Responsibility Report: "Climate change is an important issue, generating growing interest from many sectors of society – from individuals and NGOs, to governments and corporations. The seriousness of this issue means that everyone has a role to play in reducing our impacts, including companies like McDonald's."

McDonald's says that it is addressing climate change by first managing electricity and natural gas use at its restaurants. Electricity accounts for 98 percent of the company's restaurant's direct CO<sub>2</sub> emissions, with HFCs from refrigerants making up the remaining 2 percent. In 2007, McDonald's also worked with Conservation International to conduct an assessment of the company's climate change impacts and priority areas. The company has developed best practice processes for tracking restaurants' energy use in Canada, France, the UK and the US, which will be shared with other markets.

# McDONALD'S CORP.

<i>Executive Responsibility</i>	McDonald's Worldwide Corporate Relations Council oversees and advises on the company's corporate responsibility efforts. In addition, a Corporate Responsibility department coordinates corporate responsibility policies and programs and a Global Environmental Council identifies strategic environmental priorities and shares best practices across the company. McDonald's has also formed a Global Energy Team to share best practices related to environmental management.
<i>External Initiatives</i>	McDonald's is a member of both the US Green Building Council and Ceres. The company also formed in 2004 the Refrigerants Naturally! coalition with The Coca-Cola Company and Unilever to promote HFC-free alternative technologies. McDonald's and its partners were recognized by the US EPA with its 2005 Climate Protection Award for these efforts.
<i>Employee Training</i>	Employees from McDonald's home office have formed a corporate Green Team to educate other employees on environmental issues.
<i>Executive Compensation</i>	None identified.

---

## Public Disclosure

Score: 3

<i>Annual Report</i>	McDonald's 2007 Annual Report includes the following climate change mention: "The US Environmental Protection Agency named McDonald's a 2007 Energy Star Partner of the Year for our energy efficiency program which resulted in an estimated 200,000 ton decrease in CO <sub>2</sub> emissions and energy savings of \$30 million Systemwide in the US."
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	McDonald's corporate responsibility report includes sections on Sustainable Supply Chain and Environmental Responsibility. The company's website also includes a Corporate Responsibility blog called Open for Discussion. Several regional and local corporate responsibility reports have also been issued, including an environmental best practices report for European operations.  <b>Sustainability Report:</b> 2008 <i>Worldwide Corporate Responsibility Report</i> , October 2008 <b>URL:</b> <a href="http://www.crmcdonalds.com/publish/csr/home/report.html">http://www.crmcdonalds.com/publish/csr/home/report.html</a> <b>GRI Accordance:</b> Draft G3
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Not Public)
<i>Public Policy</i>	None identified.

---

## Emissions Accounting

Score: 7

GHG Emissions Inventory

Year: 2007

Facility/Region: Nine major markets

Protocol: Other

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	—
Scope 2 (Indirect –Electricity)	1,880,000*
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

\* Includes energy data exclusively from company-operated restaurants except in Brazil and Japan where franchisee/developmental licensee restaurants are included due to organizational structure.

Accounting Methods

Since, in most markets, electricity cannot be traced back from a restaurant to a particular power station, GHG emissions were calculated on the basis of country-level data using the national average amounts of CO<sub>2</sub> emissions per kWh for the company's nine major markets (not including US and China).

External Verification

None identified.

Certified CO<sub>2</sub> Offsets

None identified.

## Strategic Planning

Score: 11

Emissions Reduction Targets

None identified.

Energy Efficiency

McDonald's USA has been an ENERGY STAR partner for more than 10 years and was named as the 2007 ENERGY STAR Partner of the Year by the US EPA in 2007. McDonald's USA has also started a recognition program to showcase "Energy All-Stars" – franchisees, restaurant managers, corporate staff and suppliers who excel at applying McDonald's energy tools and best practices to control energy usage.

McDonald's provides restaurant managers with online tools on energy efficiency and also considers energy efficiency while evaluating restaurant equipment, particularly HVAC systems. Many European restaurants also have automated energy management systems, while similar systems are being adopted for new restaurant designs in Latin America. Other programs include:

- In Canada and the US, restaurants are testing high-efficiency LED lot lights.
- McDonald's France commissioned an interactive software program, EcoProgress, to help monitor and reduce energy consumption in restaurants.
- An independent franchise in the US has installed a Ground Source Heat Pump.
- A Low Oil Volume Fryer is being used to improve cooking efficiency and reduce packaging waste.

In terms of green building, McDonald's opened its first green restaurant in Sweden in 2000. The company now has a LEED certified restaurant in Savannah, Georgia and a new restaurant which opened in Chicago, IL in August 2008 will be submitted for LEED certification. McDonald's says it is also exploring the possibility of seeking LEED certification for other new restaurants and has established green building guidelines that will be rolled out for remodeled restaurants in Europe.

*Renewable Energy* McDonald's has bio-diesel recycling programs in Austria, Brazil and most European countries to recycle used cooking oil and turn it into fuel. In July 2007, the company announced its UK distribution fleet would be powered by bio-diesel made of recycled cooking oil from its restaurants. The initiative is expected to replace nearly six million liters of fuel and save around 1,675 tons of carbon dioxide annually. Other examples include collaborating in Switzerland to turn organic material into biogas, installing a wind turbine in Brazil and testing solar panels at restaurants in Germany.

*Emissions Trading* None identified.

*Products & Services* None identified.

*Research & Development* McDonald's has been working with suppliers to develop and test restaurant equipment that uses alternatives to HFC-based refrigerants. The company opened its first HFC-free restaurant in Denmark in 2003 and plans to open a second one later this year.

*Supply Chain Management* In 2007, McDonald's established a Sustainable Supply Chain Steering Committee, which along with the Global Supply Chain Department, sets guidelines for managing its supply chain along social, economic and environmental issues. The company says it is working with direct suppliers "to measure and reduce water, energy, air, and waste impacts" through its Environment Scorecard program. In Europe, McDonald's is working with suppliers to compile an estimate of its supply chain's total carbon footprint.

Food packaging is also a major area of focus for McDonald's with a focus on reduction of unnecessary packaging and weight, favoring materials and processes that minimize pollution (such as maximizing the use of recycled content and unbleached fiber) and utilizing renewable materials. In the company's major markets, approximately 83 percent of packaging is made of some form of paper or other wood-fiber material, and McDonald's is continuing to work on identifying sustainable sources for its packaging.

# DARDEN RESTAURANTS, INC.

NEW YORK STOCK EXCHANGE – DRI  
Restaurants

While Darden Restaurants has established a Public Responsibility Committee on its Board to review environmental matters, the company has not made public a formal strategy to address the risks and opportunities posed by climate change. The company is in the process of conducting a corporate-wide greenhouse gas (GHG) emissions inventory and says it will set emission reduction goals upon its completion.

**Summary Score: 8**

## Company Information

Darden Restaurants is the leading casual-dining operator (in terms of revenue) with more than 1,700 restaurants in the United States and Canada. Its flagship chains include seafood segment leader Red Lobster and Italian-themed Olive Garden. Darden also operates the smaller LongHorn Steakhouse, The Capital Grille, Bahama Breeze and Seasons 52 restaurants. As of 2008, the company had approximately 179,000 employees.

### Contact Information

**Chairman/CEO:** Clarence Otis Jr.

**Website:** [www.dardenrestaurants.com](http://www.dardenrestaurants.com)

**Address:** 5900 Lake Ellenor Dr., Orlando, FL 32809

## Board Oversight

**Score: 1**

<i>Board Committee/Member</i>	Public Responsibility Committee
<i>Board Role</i>	The Public Responsibility Committee is responsible for reviewing the company's actions related to corporate social responsibility, including matters related to the environment. Climate change oversight is not specifically mentioned in the Committee's charter.
<i>Board Training</i>	None identified.

## Management Execution

**Score: 3**

<i>CEO Leadership</i>	None identified.
<i>Company Strategy</i>	Darden's commitment to the sustainability of natural resources is mainly focused on protecting the ocean's resources and working with suppliers on animal welfare standards. The company has not made public a climate change-specific strategy or policy statement. However, the company is currently in the process of conducting a GHG emissions inventory for all Darden assets. Based on the inventory results, the company will identify emission reduction opportunities and set reduction goals.
<i>Executive Responsibility</i>	Darden's Director of Sustainability is responsible for environmental and climate change-related issues.
<i>External Initiatives</i>	None identified.
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	None identified.

# DARDEN RESTAURANTS, INC.

## Public Disclosure

Score: 0

<i>Annual Report</i>	No climate change mention.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	Darden does not publish a separate sustainability report. The company has an environmental section on its website, but this does not include climate change as a focus area.
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Not Public)
<i>Public Policy</i>	None identified.

## Emissions Accounting

Score: 0

<i>GHG Emissions Inventory</i>	Darden is in the process of conducting a comprehensive GHG emissions inventory for all company assets.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score: 4

<i>Emissions Reduction Targets</i>	When Darden completes its corporate GHG emissions inventory, the company says it will assess emission reduction opportunities and set appropriate reduction goals.
<i>Energy Efficiency</i>	Darden is constructing a new corporate headquarters in Orlando, FL that will be LEED certified when completed.
<i>Renewable Energy</i>	None identified.
<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	None identified.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	None identified.



While YUM has begun to address environmental issues more systematically throughout its operations, the company has yet to announce a comprehensive strategy to address risks and opportunities posed by climate change. In 2006, YUM established both a Corporate Social Responsibility role and an Environmental Leadership Council. The company is also in the process of examining the energy efficiency of its restaurants; however, it has not yet conducted a greenhouse gas (GHG) emissions inventory or set emissions reduction targets.

**Summary Score: 8**

## Company Information

YUM! Brands is the largest fast-food operator in the world in terms of number of locations, with more than 35,000 outlets in more than 100 countries. Its flagship chains include KFC (with more than 14,800 units), Pizza Hut (about 12,800) and Taco Bell (more than 5,800). YUM also operates the Long John Silver's seafood chain, along with several hundred A&W restaurants. The company operates just under 20 percent of its restaurants; the rest are either franchised or licensed locations. As of 2007, the company had approximately 1.3 million associates including company-owned and franchised operations.

### Contact Information

**Chairman/CEO:** David C. Novak

**Website:** [www.yum.com](http://www.yum.com)

**Address:** 1441 Gardiner Lane, Louisville, KY 40213, United States

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 4**

*CEO Leadership* None identified.

*Company Strategy* YUM's Worldwide Code of Conduct includes the following statement on environmental protection: "We believe that protecting the environment is an important part of good corporate citizenship. We are committed to minimizing the impact of our businesses on the environment with methods that are socially responsible, scientifically based and economically sound. We encourage conservation, recycling and energy use programs." The company has identified energy use in restaurants, packaging and sustainable building design as three key environmental challenges.

*Executive Responsibility* In 2006, YUM established a dedicated Corporate Social Responsibility role to review and assess its global impact in social, environmental and economic areas and develop strategies and initiatives in response. The company's public disclosure does not indicate if there is specific oversight of climate change issues. Also in 2006, YUM formed an Environmental Leadership Council whose goal is to identify and deploy programs that drive measurable sustainability advances. The group is addressing building material and design, energy conservation, energy procurement, waste, packaging and education.

# YUM! BRANDS, INC.

<i>External Initiatives</i>	None identified.
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	None identified.

---

## Public Disclosure

Score: 0

<i>Annual Report</i>	No climate change mention.
<i>Securities Filings</i>	YUM discusses the company's recent sustainability initiatives in its 2008 Proxy Statement in response to a shareholder proposal that requested a report on supply chain safety and sustainability.
<i>Other Disclosure</i>	YUM will be publishing its first global Corporate Social Responsibility report later in 2008.
<i>Carbon Disclosure Project</i>	No response.
<i>Public Policy</i>	None identified.

---

## Emissions Accounting

Score: 0

<i>GHG Emissions Inventory</i>	None identified.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

---

## Strategic Planning

Score: 4

<i>Emissions Reduction Targets</i>	None identified.
<i>Energy Efficiency</i>	<p>Over the past two years, YUM's US company-owned restaurants worked to reduce energy consumption achieving total annualized savings of 60,000 metric tons of CO<sub>2</sub>, about 18 percent above the company's goal of 51,000 metric tons. These programs also saved \$17 million in energy costs. YUM says it continues to focus on finding ways in which the company can reduce its worldwide environmental impact, including:</p> <ul style="list-style-type: none"><li>■ Equipment retrofits and energy efficient innovations;</li><li>■ Better energy management systems;</li><li>■ Behavioral changes related to use of energy and waste and water management in restaurants;</li><li>■ Recycling paper and other restaurant packaging;</li><li>■ Material selection and use in building design and retrofits.</li></ul>
<i>Renewable Energy</i>	None identified.
<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	None identified.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	YUM's Supplier Code of Conduct does not reference climate change-specific issues.

# BURGER KING HOLDINGS, INC.

NEW YORK STOCK EXCHANGE – BKC  
Restaurants

While Burger King has undertaken some initiatives to improve energy efficiency at its restaurants, the company has yet to make public a formal strategy to address the risks and opportunities posed by climate change. There is no evidence of board or executive leadership with respect to climate change, and the company has not set greenhouse gas (GHG) emission reduction targets. The company says it is in the process of collecting relevant data and preparing its first Corporate Social Responsibility report, to be published by the end of 2008. The company declined to comment on this profile.

**Summary Score: 6**

## Company Information

Burger King Holdings operates the world's second largest hamburger chain with more than 11,500 restaurants in the US and more than 70 other countries. More than 1,300 restaurants are company-owned, while the rest are owned and operated by franchisees. Investment firms TPG Capital, Bain Capital and Goldman Sachs each own about 30 percent of the company. As of June 30, 2008, Burger King had approximately 41,000 employees in its restaurants, field management offices and global headquarters.

### Contact Information

**Chairman/CEO:** John W. Chidsey

**Website:** [www.burgerking.com](http://www.burgerking.com)

**Address:** 5505 Blue Lagoon Dr., Miami, FL 33126, United States

## Board Oversight

**Score: 0**

<i>Board Committee/Member</i>	None identified.
<i>Board Role</i>	None identified.
<i>Board Training</i>	None identified.

## Management Execution

**Score: 1**

<i>CEO Leadership</i>	None identified.
<i>Company Strategy</i>	Burger King has a Corporate Social Responsibility mission statement that includes a commitment to "sensitivity toward the environment", but the company has not made public a strategy to specifically address issues related to climate change.
<i>Executive Responsibility</i>	None identified.
<i>External Initiatives</i>	None identified.
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	None identified.

# BURGER KING HOLDINGS, INC.

## Public Disclosure

Score: 1

<i>Annual Report</i>	No climate change mention.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	Burger King says it plans to publish its first Corporate Social Responsibility report by the end of 2008. The company has also made available on its website information about energy efficiency efforts undertaken at its restaurants.
<i>Carbon Disclosure Project</i>	Not sent CDP6 questionnaire.
<i>Public Policy</i>	None identified.

## Emissions Accounting

Score: 0

<i>GHG Emissions Inventory</i>	None identified.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score: 4

<i>Emissions Reduction Targets</i>	None identified.
<i>Energy Efficiency</i>	<p>Burger King has introduced a new restaurant design, known as the Return On Capital (ROC) design, focused on energy efficiency. These facilities are smaller than the traditional restaurant, resulting in lower heating and cooling costs. ROC buildings also come with a newly designed equipment package, including such equipment as tankless water heaters, which results in increased energy savings. There are currently 110 ROC buildings in operation around the world and another 40 under construction.</p> <p>Burger King says it has also been able to reduce its carbon footprint with the rollout of the new Duke Flexible Batch Broiler, which is able to cycle energy on and off saving energy needed for cooling. As a result, gas consumption and cost have been reduced 52 percent compared to previous broilers, while the consumption and cost of electricity has been reduced almost 90 percent.</p>
<i>Renewable Energy</i>	None identified.
<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	None identified.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	None identified.

While Tim Hortons has disclosed some information on climate-related risks in its securities filings and has discussed more general environmental programs on its website, the company has yet to make public a formal strategy to address the risks and opportunities posed by climate change. There is no evidence of board or executive leadership with respect to climate change, and the company has not set greenhouse gas (GHG) emission reduction targets.

**Summary Score: 4**

## Company Information

Canada's leading quick-service restaurant brand, Tim Hortons operates a chain of more than 3,200 coffee and donut shops across Canada and in about 10 US states. The chain includes free standing as well as kiosk and mall-based units; all but about 70 of the locations are operated by franchisees. In 1995, Tim Hortons merged with Wendy's International leading to an expansion in the United States; then in September 2006 the company was spun off following an initial public offering. As of 2007, the company had approximately 3,390 employees, not including franchised location employees.

### Contact Information

**Chairman:** Paul D. House  
**CEO:** Donald B. Schroeder

**Website:** [www.timhortons.com](http://www.timhortons.com)

**Address:** 874 Sinclair Rd., Oakville, Ontario L6K 2Y1, Canada

## Board Oversight

**Score: 0**

<i>Board Committee/Member</i>	None identified.
<i>Board Role</i>	None identified.
<i>Board Training</i>	None identified.

## Management Execution

**Score: 0**

<i>CEO Leadership</i>	None identified.
<i>Company Strategy</i>	Tim Hortons says that the company works with "stakeholders including customers, stores operators, suppliers and governments, to drive toward environmental leadership best practices." The company's main areas of focus for environmental programs are Community Leadership, Recycling, Waste Reduction and Litter Awareness. A climate change-specific strategy has not been made public.
<i>Executive Responsibility</i>	None identified.
<i>External Initiatives</i>	None identified.
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	None identified.

# TIM HORTONS INC.

## Public Disclosure

Score: 4

<i>Annual Report</i>	Tim Horton's 2007 Annual Report includes a section on "Environmental Strides" and the following statement: "We are focused on programs to support litter awareness, recycling, waste reduction and diversion, and reduced energy consumption."
<i>Securities Filings</i>	Tim Hortons' 2007 Form 10-K includes in its outlining of Risk Factors the following statement: "Our distribution operations and supply chain may be impacted by various factors, some of which are beyond our control, that could injure our brand, cause a loss of revenues and/or increase costs, including price fluctuations in our supplies and commodities, most notably coffee...due to various market factors, including general inflation, seasonal shifts, inclement weather and climate change..."
<i>Other Disclosure</i>	Tim Hortons does not publish a separate sustainability report. The company has an environmental section on its website, but this does not include climate change as a focus area. Environmental priorities include community leadership, recycling, waste reduction and litter awareness.
<i>Carbon Disclosure Project</i>	Not sent CDP6 questionnaire.
<i>Public Policy</i>	None identified.

## Emissions Accounting

Score: 0

<i>GHG Emissions Inventory</i>	None identified.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score: 0

<i>Emissions Reduction Targets</i>	None identified.
<i>Energy Efficiency</i>	None identified.
<i>Renewable Energy</i>	None identified.
<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	None identified.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	None identified.

Intel began reducing its GHG emissions with its commitment to reduce PFC emissions, a potent GHG, in the late 1990s. The company has since set and is on track to meet absolute and intensity GHG emission reduction targets and energy efficiency targets. It has a dedicated funding stream for climate and energy initiatives and it is the largest purchaser of renewable energy in the US, according to the US EPA. In 2007 the company completed its transition to the more energy efficient and higher performance Intel Core™ architecture in its full line of desktop, mobile and server processors. Intel is involved in several initiatives to improve the energy efficiency of computers, servers and data centers, including the Climate Savers Computing Initiative which it cofounded with Google.

**Summary Score: 72**

## Company Information

Founded in 1968, Intel is now the largest global semiconductor chip manufacturer by revenue. Microprocessors, chipsets and flash memory are the company's primary products, which are offered to customers in variable states of integration. Intel has 86,300 employees globally as of December 2007.

### Contact Information

**Chairman:** Craig R. Barrett  
**CEO:** Paul S. Otellini

**Website:** [www.intel.com](http://www.intel.com)

**Address:** 2200 Mission College Boulevard, Santa Clara, California, 95054-1549, United States

## Board Oversight

**Score: 6**

### Board Committee/Member

Governance and Nominating Committee

### Board Role

The Corporate Governance and Nominating Committee is tasked in its charter to periodically review corporate responsibility performance and reporting, including environmental matters. The Committee reviews the annual corporate responsibility report, which includes climate related information. During the past year the Committee held several discussions on the implications of high energy costs and the associated opportunities for Intel's newest energy efficient products.

### Board Training

None identified.

## Management Execution

**Score: 16**

### CEO Leadership

President and CEO Otellini will serve on the Copenhagen Climate Council established to ensure progress in the next stage of international climate negotiations in Copenhagen in 2009.

### Company Strategy

Intel's climate change strategy has three areas of focus: reducing the climate change footprint of its operations, improving product energy efficiency and taking the lead in external climate change initiatives. The company has identified energy efficient products and reducing energy use as two of the most material sustainability issues it faces.

Intel's initial measures to reduce GHG emissions from its operations began in 1996 through development of the US EPA partnership with the semiconductor industry established



to reduce the use of PFCs, a class of potent GHGs, in semiconductor manufacturing. Partners committed in 1998 to a 10 percent reduction of PFCs below 1995 levels by 2010. Later, Intel joined EPA Climate Partners and set a GHG reduction goal of 30 percent per unit of production by 2010 relative to 2004. Intel's current goal is to reduce its absolute GHG footprint by 20 percent by 2012 from 2007 levels. The company has also set energy conservation targets and has a dedicated funding stream for energy and resource conservation projects. In 2003, Intel set a 4 percent per year, per chip reduction in energy use from 2002 to 2010. Intel later set a second generation target to reduce energy use per chip by 5 percent annually from 2007 to 2012.

<i>Executive Responsibility</i>	Several departments share responsibility for climate-related matters. The corporate EHS and Government Affairs departments develop and manage climate projects and seek opportunities for external partnerships. In concert with the global utilities department, they drive energy conservation programs for Intel's building operations. A senior management level committee reviews and approves of opportunities to use renewable energy sources. Product groups drive product energy efficiency through design. Manufacturing groups are responsible for energy efficient product manufacturing. The executive staff of the manufacturing organization reviews environmental indicators and progress including GHG emissions quarterly.
<i>External Initiatives</i>	The company has joined the following initiatives: Climate Savers Computing Initiative (cofounder); US EPA Climate Leaders; US EPA PFC Reduction/Climate Partnership; US EPA Green Power Partnership; The Green Grid; SEMATECH; LessWatts.org; Pew Center on Global Climate Change Business Environment Leadership Council
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	In 2008 every Intel employee will have a part of their bonus linked to environmental performance as measured by product energy efficiency, Intel's environmental reputation and specific projects and targets. Managers with specific responsibility for certain climate or energy goals have a larger portion of their remuneration tied to progress on such goals.

## Public Disclosure

**Score: 11**

<i>Annual Report</i>	CEO Otellini highlights product energy efficiency in his letter to shareholders in the 2007 Annual Report.
<i>Securities Filings</i>	The Business description in the 2007 Form 10-K includes a section on EHS compliance which mentions Intel's GHG reduction target and associated strategy to reduce energy consumption at its factories and in product manufacturing by working with suppliers of manufacturing tools.
<i>Other Disclosure</i>	Intel's Climate Change Policy, dated May 2007, is available publicly on the company website. The website and corporate responsibility report discuss Intel's initiatives to reduce energy use in its operations, purchase renewable energy credits, and increase the efficiency of its products.

**Sustainability Report:** *With Leadership Comes Responsibility: Intel FY07 Corporate Responsibility Report*, May 2008

**URL:** [http://download.intel.com/intel/cr/gcr/pdf/07CR\\_report.pdf](http://download.intel.com/intel/cr/gcr/pdf/07CR_report.pdf)

**GRI Accordance:** G3 Application Level B+

## Carbon Disclosure Project

Answered Questionnaire (Public)

### CDP6 Risk Disclosure

Intel indicates that its major regulatory risk is the possibility that PFCs, a potent class of GHGs used in semiconductor manufacturing, will be regulated or banned. The company has been reducing its PFC use since 1998. Higher energy prices as a result of regulations targeting power generators are another possible risk.

Intel does not anticipate being severely impacted by physical risks associated with climate change although it notes that it has many operations located in semi-arid regions which could be at risk of water scarcity. The company has water conservation programs at its manufacturing operations as well as business recovery plans in the event of a business disruption.

### Public Policy

Intel publishes its climate public policy stance in a position statement issued in May 2007. The company believes that federal, market-based legislation that recognizes early action is preferable to state or regional initiatives. If already enacted, state or regional initiatives should sunset when federal legislation takes effect. The exception to Intel's preference for federal action is renewable portfolio standards, which work better at state or local levels. Intel also supports US participation in international climate negotiations. With regard to EU legislation, Intel's position is that further development of the European Climate Change Program should take into consideration prior action, equitable burden sharing, and European competitiveness as a whole.

## Emissions Accounting

Score: 13

### GHG Emissions Inventory

Year: 2007

Facility/Region: Global Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	1,151,742*
Scope 2 (Indirect –Electricity)	2,527,124
Scope 3	—
Travel	250,000
Logistics	—
Products	—
Supply Chain	—

\* Stationary combustion

### Accounting Methods

Intel used the GHG Protocol calculation tools for emissions from stationary combustion and electricity purchases. Intel then used the US EPA's eGrid 2006, version 2.1 emission factors for purchased electricity in the United States. Emission factors for PFCs were developed internally by direct emissions testing.

*External Verification* EPA Climate Leaders verifies Intel's submission of its inventory data. The company is also receiving technical assistance from the EPA to develop an Inventory Management Plan.

*Certified CO<sub>2</sub> Offsets* Intel says that it has a policy not to use carbon offsets. However Intel does purchase 1.3 billion kWh per year worth of tradable RECs from renewable energy supplier Sterling Planet.

## Strategic Planning

Score: 26

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Absolute)</b>	<b>20%</b>	<b>2007</b>	<b>2012</b>	<b>Global</b>
<b>Energy Use</b>	<b>5% annual reduction per chip</b>	<b>2007</b>	<b>2012</b>	<b>Global</b>

*Target Details* Intel's most recent GHG reduction goal is to reduce absolute emissions by 20 percent below 2007 levels by 2012. Intel also has an emissions reduction intensity goal, set earlier as part of its participation in EPA Climate Leaders, to reduce emissions per production unit 30 percent from 2004 – 2010. In April 2007, Intel joined the Chicago Climate Exchange, which commits the company to reducing global GHG emissions by 6 percent below average annual emissions from 1998 through 2001 by 2010. The company also has committed to reducing the use of PFCs in semiconductor manufacturing by 10 percent below 1995 levels by 2010. Finally, Intel has set an energy efficiency goal per chip, originally a 4 percent per year reduction from 2002 to 2010 and now updated to a 5 percent annual reduction per chip between 2007 and 2012.

*Target Achievement* Intel has just instituted its absolute GHG emissions reduction target and it expects absolute emissions, which have been roughly flat since 2004, to begin to decrease in 2008 due to its renewable energy purchases. Normalized emissions from the company's operations have decreased by 20 percent since 2004, putting the company on track to meet its Climate Leaders target. Normalized PFC emissions are also down 95 percent since 1995 with absolute emissions down 56 percent as of 2007. Energy consumption per chip is down an average of 4 percent per year since 2002. However in 2007, energy intensity per chip increased 4 percent from 2006, but in absolute terms the company reduced energy use by 2 percent from 2006 to 2007.

*Energy Efficiency* Intel has spent over US \$24 million on energy efficiency projects since 2002 and it estimates that the investment saved the company \$40 million. The company has a dedicated funding stream for energy and resource conservation projects.

Energy efficiency measures include replacing inefficient lighting, boiler and chilled water system upgrades, and HVAC energy efficiency improvements. Automatic dryer blow down valves and optimized oil-free air controls have led to energy savings as well. Intel is also seeking LEED certification for some of its new facilities. An office building in Israel is set to open in the fall of 2008 as LEED certified. Intel is working with the US Green Building Council, the developer of the LEED system, to set certification standards for wafer fabrication facilities and it will then certify its newest facility in Arizona.

*Renewable Energy* In 2008 Intel announced it would purchase 1.3 billion kWh per year worth of RECs in a multi-year contract from renewable energy supplier Sterling Planet. The RECs will be Green-e

certified by the Center for Resource Solutions. This makes Intel the largest renewable energy purchaser in the US according to the US EPA Green Power Purchase Program. The portfolio will be comprised of energy generated from wind, solar, small-scale hydroelectric and biomass. Intel says it is the largest wind power purchaser in Oregon and a significant buyer in New Mexico.

#### *Emissions Trading*

Intel currently has one site in Ireland regulated under the EU ETS. Also in 2007, Intel became a member of the voluntary Chicago Climate Exchange in which it plans to trade shares.

#### *Products & Services*

In 2007, the company completed its transition to Intel Core™ microarchitecture. Its desktop, mobile and server processors are now all duo and quad core processors which are more energy efficient for system throughput compared to single core processors. Also in 2007 Intel produced the first processors based on 45nm technology which are more efficient than chips built using 65nm technology. The company also developed the Eco-Rack, a server rack demonstration project which uses 16 percent to 18 percent less power than a standard server rack.

Intel is working with EPA ENERGY STAR program to develop new computer energy efficiency standards and it is working with the European Commission and others to develop similar specifications under an EU directive. In collaboration with other industry partners, Intel established a benchmark for servers systems known as SPECpower. In 2007, the company joined an industry partnership to improve data center energy efficiency known as The Green Grid, and cofounded the Climate Savers Computing Initiative with Google aiming for a 50 percent reduction in CO<sub>2</sub> emissions from computers by 2010.

#### *Research & Development*

Intel is a sponsor of a National Academies of Science study entitled “America’s Energy Future: Technology Opportunities, Risks and Tradeoffs” which will assess the current and predicted state of energy supply, storage and end-use technologies. With the American Electronics Association in Europe Intel is also sponsoring a study on how Europe can use technology to meet its energy efficiency goals. Intel is also participating in a study led by the Global e-Sustainability Initiative to find new opportunities where information technology can drive energy efficiency gains. Intel does not state the extent of its financial commitment to these studies.

#### *Supply Chain Management*

Intel requires its suppliers to meet certain environmental standards including restrictions on the use of some materials. Ozone-depleting substances, some of which are potent GHGs, are one example of banned substances. The Supplier Corporate Responsibility Management Review Committee leads Intel’s efforts at incorporating responsibility into its supply chain management. Intel audits and educates its suppliers on corporate responsibility matters and hosts a supplier website which contains an environmental, health and safety section. Intel is also a founding member of Electronic Industry Citizenship Coalition, an industry coalition formed to create a comprehensive set of tools and methods to implement a supply chain Code of Conduct for the ICT industry.

# APPLIED MATERIALS, INC.

NASDAQ STOCK EXCHANGE – AMAT  
Semiconductors

Applied Materials plans to expand its greenhouse gas (GHG) inventory in 2008 and seek new opportunities for emissions reductions. As part of its membership in US EPA Climate Leaders the company committed to reducing its CO<sub>2</sub>e emissions by approximately 20 percent below 2006 levels by 2012. The company has also set product energy efficiency and renewable energy purchase targets. In 2007, Applied launched a new Energy and Environmental Solutions group which will capitalize on its nano-manufacturing expertise to sell products for use in solar photovoltaic cell production, and which are expected to improve the solar -to-energy conversion ratio.

**Summary Score: 67**

## Company Information

Applied Materials was incorporated in 1967 and is now the largest global semiconductor fabrication equipment provider by revenue. Applied specializes in nano-manufacturing for the semiconductor, flat panel display, solar and other industries. The company's four divisions are: Silicon, Fab Solutions, Display and Energy and Environmental Solutions. As of 2007, the company had approximately 15,300 employees.

### Contact Information

**Chairman:** James C. Morgan  
**CEO:** Michael R. Splinter

**Website:** [www.appliedmaterials.com](http://www.appliedmaterials.com)

**Address:** 3050 Bowers Avenue, P.O. Box 58039, Santa Clara, California, 95052-8039, United States

## Board Oversight

**Score: 5**

### Board Committee/Member

Strategy Committee and Audit Committee

### Board Role

The Strategy Committee of the board oversees sustainability matters and the Audit Committee of the board oversees Environmental, Health & Safety (EHS) matters. The Strategy Committee will begin to receive a regular report on climate change matters, from the VP of Corporate Strategy, with input from the Head of EHS & Sustainability.

### Board Training

None identified.

## Management Execution

**Score: 16**

### CEO Leadership

In 2007, CEO Splinter began chairing an internal steering committee on sustainability and climate change. In addition, Splinter was a member of the steering board to the World Economic Forum's CEO Climate Policy Recommendations to the G8 Leaders, to which Applied Materials is a signatory. Splinter made the following statement about the recommendations: "Energy and the environment are the two great social and engineering challenges of our time and will only increase in importance as world economies continue to grow. As businesses and government prepare for post-Kyoto, these proposed climate change policy recommendations serve as a useful guide."

### Company Strategy

Applied Materials says it is committed to reducing GHG emissions from both its operations and its products. The company sets out its five-part climate change strategy in the 2007 EHS report, which includes the following elements:

# APPLIED MATERIALS, INC.

- Improve energy efficiency operations.
- Purchase renewable energy and develop on-site renewable generation.
- Enhance product offerings to enable customers to reduce their GHG emissions.
- Educate employees and business partners and empower them to take action to reduce climate impact.
- Advocate for local, national and international GHG reducing and energy conserving policies.

In its CDP6 response, Applied states that GHG emissions reduction measures are evaluated based on cost and their ability to support business objectives. Applied will implement them in the following preference order: internal energy efficiency projects, green power purchases, renewable energy installations, and RECs or offsets as needed.

Applied helped develop the SEMI s23 industry standard for measuring energy consumption of semiconductor tools. The company is now comparing its new and older products against this standard and it states that energy per unit of output has improved.

## *Executive Responsibility*

CEO Splinter is the chairperson for an internal sustainability and climate change executive steering committee. Applied Material's scorecard, which includes progress towards its CO<sub>2</sub> reduction goal, is reviewed quarterly at the executive level. Bruce Klafter is the Head of Corporate Responsibility & Sustainability, overseeing climate change matters.

## *External Initiatives*

The company has joined the following external initiatives: US EPA Climate Leaders, US EPA Green Power Partnership, Sustainable Silicon Valley, World Economic Forum's CEO Climate Policy Recommendations to the G8 Leaders, Next Ten Green Innovation Index, Technet, Solar Alliance, and Solar Energy Industries Association.

## *Employee Training*

Training its employees is one of the tenets of the company's climate change strategy. Applied Materials collaborated with local environmental organizations to include a tool on the intranet site that allows employees to calculate their personal GHG emissions and to purchase offsets from third-party providers. In 2008 the company launched a sustainability intranet site that incorporates news, resources and other materials to enable employees to work and live sustainably. Green Teams are in place in several locations and are being formed in others to further educate employees and to develop new ideas.

## *Executive Compensation*

For certain managers, sustainability objectives have been incorporated into their evaluations for FY08 and into FY09. Climate change performance does not appear to be linked to executive remuneration according to the Human Resources and Compensation Committee report in the 2008 proxy statement.

---

## Public Disclosure

**Score: 8**

### *Annual Report*

The letter to shareholders by the CEO and the Chairman discusses Applied's GHG and energy reduction targets and notes that in 2008 the company will focus on expanding its activities in the solar power market.

### *Securities Filings*

No climate change mention.



# APPLIED MATERIALS, INC.

*Other Disclosure* Applied publishes quarterly, web-based Social Responsibility reports on its website. Applied also published a web-based and downloadable Environmental Responsibility Report, which includes a section on climate change, and one on environmental management systems which also details the company's green power purchases. In addition the Company has launched a "Bright Future" portal on its web site that illustrates initiatives in both the product and operations areas.

**Sustainability Report:** FY07 Environmental Responsibility Report, September 2007

**URL:** <http://www.appliedmaterials.com/about/csrr.html>

**GRI Accordance:** G3 Guideline map included; no self-declared application level

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* Applied is following regulatory developments but it does not anticipate that any current or pending regulation will have a material financial impact or a strategic impact on the company's operations. Regulation that targets utilities could have a downstream impact on Applied. The company does not have any facilities in coastal or low-lying areas that would be vulnerable to sea level rise, nor are its operations particularly susceptible to extreme weather events. Applied has business continuity and emergency response plans in place, and it evaluates its suppliers for physical risks.

*Public Policy* Applied Materials is a signatory to the World Economic Forum's CEO Climate Policy Recommendations to the G8 Leaders. The company is involved in policy debates through industry associations including Technet, Tech CEO Council, Information Technology Industry Council, SEMI, and the Solar Energy Industry Association.

## Emissions Accounting

**Score: 13**

*GHG Emissions Inventory* **Year:** 2007 **Facility/Region:** Global **Protocol:** GHG Protocol

<b>Emissions</b>	<b>CO<sub>2</sub>e (Metric Tonnes)</b>
<b>Scope 1 (Direct)</b>	<b>25,237</b>
<b>Scope 2 (Indirect –Electricity)</b>	<b>147,361</b>
<b>Scope 3</b>	—
<b>Travel</b>	<b>34,558</b>
<b>Logistics</b>	—
<b>Products</b>	—
<b>Supply Chain</b>	—

*Accounting Methods* None identified.

*External Verification* The US EPA Climate Leaders program verifies the data via a desktop review and site visit.

*Certified CO<sub>2</sub> Offsets* Applied states that it will use market mechanisms including RECs and offsets if needed, but it is last on its list of preferred climate solutions, after internal energy efficiency projects, green power purchases, and on-site renewable energy installations.



# APPLIED MATERIALS, INC.

## Strategic Planning

Score: 25

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Absolute)</b>	<b>50,000 mtCO<sub>2</sub>e</b>	<b>2006</b>	<b>2012</b>	<b>Global</b>
<b>Energy Efficiency</b>	<b>20% product improvement</b>	<b>2006</b>	<b>2012</b>	<b>Global</b>
<b>Renewable Energy</b>	<b>15%</b>	<b>N/A</b>	<b>2012</b>	<b>Global</b>

#### Target Details

Applied set a target of reducing its GHG emissions by 50,000 mtCO<sub>2</sub>e by 2012 from a 2006 baseline, which is roughly equivalent to a 20 percent emissions reduction. This is the company's target under the voluntary US EPA Climate Leaders program. Applied has also committed to at least a 50 percent reduction in indirect emissions attributable to lab gases, primarily the six perfluorocarbons (PFCs) covered by the Kyoto Protocol. In addition, Applied set targets to improve the energy efficiency of its products by 20 percent by 2012, and to purchase 15 percent of its energy from renewable sources, all by 2012.

#### Target Achievement

It is not clear where the company stands on reaching its GHG reduction or product energy efficiency targets, but Applied has made progress towards its renewable energy purchases. The company purchased 17,962 MWh of renewable energy in 2007. It is not clear what portion of total energy purchases that comprises.

#### Energy Efficiency

Energy efficiency initiatives and manufacturing process improvements are the first options Applied considers when determining appropriate measures to reduce GHG emissions. In Fiscal Year 2007, the Company undertook over 40 projects worldwide that were estimated to save nearly 6 million kWh. Several projects are underway now or are in the planning stage, such as a continuous commissioning project on Applied's main R&D campus in California which is anticipated to save 20 percent or more of the energy used there.

The company has a commuter program to encourage biking, car sharing and mass transit use. Applied Materials was named one of the "Best Workplaces for Commuters" by the US EPA. Applied Materials also has a growing telecommuting program (called A2 or Applied Anywhere) with over 2,000 employees enrolled; participants either work from home full-time or visit the office no more than 2-3 days a week using "touch-down" spaces. The program helps cut emissions from commuters and has enabled some building consolidation as well.

#### Renewable Energy

Applied has installed solar photovoltaics at its Sunnyvale and Austin sites in the US and at its facility in Xi'an, China. According to its CDP6 response, the company also purchased 24,219 MWh of renewable energy at a cost of over \$300,000 and resulting in an estimated reduction of 13,200 MTCE. That was presumably purchased in 2007 and therefore likely includes the 8,220,000 kWh of wind and solar energy it announced it would purchase annually from Silicon Valley Power, the Santa Clara electrical utility. The figure also includes purchases from Austin Energy. That purchase is approximately equivalent to 12 percent of energy use at its Santa Clara operations. Applied Materials is presently #27 on the Fortune 500 List within the US EPA Green Power Challenge.

# APPLIED MATERIALS, INC.

*Emissions Trading* None identified.

*Products & Services* Applied has a goal to assist customers in achieving energy efficiency in new products of at least 4 to 5 percent annually over the next several years. The company uses SEMI S23 (an industry wide protocol that Applied helped develop) to measure total energy consumption on the equipment it designs and sells. Results will be compared to prior versions of similar tools or against a factory model which accounts for the fact that all factories have multiple systems installed. The goal is to achieve at least a 20 percent improvement on average, for all products newly released or modified. Since, as it notes in its CDP6 response, many of its customers are environmental leaders, Applied faces market pressure to meet its customer's energy efficiency needs.

In 2007, Applied created its Energy and Environmental Systems group, which will mainly develop and sell equipment to produce solar photovoltaic modules and cells. The group's focus is on thin film silicon for large-scale applications and crystalline silicon technologies intended for residential use. Applied expects that device and process innovations combined with its manufacturing tools will increase the conversion efficiency and yields of solar cells which will drive down the cost per watt. The group also sells equipment to produce low-emissivity and solar control architectural glass. Applied expects global climate change and the associated increase in interest in renewable energy to increase demand for these products.

*Research & Development* Applied states on its website that it funds renewable energy research at universities around the world, but details are not provided.

Applied has a venture capital arm which is making early round investments in companies that produce renewable or related energy products or technologies such as fuel cells, batteries and energy storage and low-cost methods of growing silicon wafers for photovoltaic systems.

*Supply Chain Management* A green initiative launched in 2008 by Applied's Global Supply Chain Organization added environmental criteria to the existing supplier scorecards. Data collection began with first-tier suppliers with questions on energy and water usage, energy efficient products, carbon inventories and roadmaps to improve all of those parameters. In 2008 Applied began to recognize top performers amongst its suppliers in terms of environmental criteria at regular Supplier Days. Applied is also an active participant in a sustainability and climate change Task Force within the Electronic Industry Citizenship Coalition; the EICC aims to develop tools for member and their supply chains to account for carbon in the electronics supply chain. The EICC Task Force is trying to coordinate its activities with the CDP Supply Chain Initiative as well as the WRI and other organizations.

# TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.

TAIWAN STOCK EXCHANGE – 2330 & NEW YORK STOCK EXCHANGE - TSM  
Semiconductors

Taiwan Semiconductor Manufacturing Company (TSMC)'s longstanding focus for its climate change strategy is to reduce perfluorocarbons (PFC) emissions by 2010. The company has also taken steps to reduce energy use in manufacturing and office space. In 2006, TSMC launched a Green Building Program to certify all new facilities to the US Green Building Council's Leadership in Energy and Environmental Design (LEED) standards. TSMC is monitoring pending greenhouse gas (GHG) regulation in Taiwan and it may participate as a pilot company in Taiwan's planned voluntary carbon trading scheme.

**Summary Score: 56**

## Company Information

Founded in 1987, TSMC is now the world's largest dedicated semiconductor foundry. Its business model is to manufacture the semiconductor designs of its customers; TSMC does not design, manufacture or market semiconductors under its own name. It owns and operates wafer fabricating facilities in Taiwan, and in China and the US through wholly-owned subsidiaries. As of 2007, the company had approximately 23,000 employees.

### Contact Information

**Chairman:** Dr. Morris Chang

**CEO:** Dr. Rick Tsai

**Website:** [www.tsmc.com](http://www.tsmc.com)

**Address:** No. 8, Li-Hsin Road 6, Hsinchu Science Park, Hsinchu, Taiwan, Republic of China

## Board Oversight

**Score: 6**

### Board Committee/Member

None identified.

### Board Role

TSMC states in its CDP response that climate change has been identified as an enterprise risk. The full board reviews enterprise risks semi-annually. Climate change was only recently determined to be an enterprise risk and as such it is not mentioned among the subjects for board review in the *Rules and Procedures of Board of Director Meetings* document.

### Board Training

None identified.

## Management Execution

**Score: 13**

### CEO Leadership

CEO Rick Tsai remarks in the company's 2007 CSR report: "To protect the environment, we not only strive to reduce our own energy consumption and carbon emissions, we have taken the lead in establishing a green supply chain. Our goal is to do more for the environment by using our influence and guiding our supply chain partners to lower their carbon emissions as well. TSMC will design all new plants and offices using "green building" concepts, following Taiwan's Ecology, Energy Saving, Waste Reduction, Health (EEWH) standard and the US Leadership in Energy and Environmental Design (LEED) standard."

### Company Strategy

TSMC states that global climate change is its top environmental concern and it now considers it to be an enterprise risk management item that requires regular reviews by senior management and the board. The company's strategy to reduce its carbon footprint is as follows:

# TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.

- Reduce PFC emissions through gas replacement and abatement devices.
- Implement facility energy conservation programs.
- All new facilities will adopt LEED Green Building standards.
- Provide customers with power efficient design platforms.
- Supply chain carbon footprinting and reduction program.

*Executive Responsibility* The Corporate Environmental Steering Committee is responsible for climate change matters. It is led by a senior VP and it reports directly to the CEO. A working committee comprised of individuals with environmental duties reports to the Steering Committee. A central environmental management function leads facility environmental departments, process modules and the public relations team in working on GHG reduction programs.

*External Initiatives* TSMC initiated a country-wide industrial green platform named “Taiwan Corporate Sustainability Forum” involving 20 large companies, announced in October 2008.

*Employee Training* TSMC educates its employees on environmental matters through bulletin boards in each fabrication facility and through employee promotional materials. The company also hosted 16 hours of professional lectures on climate and environmental matters by external speakers in 2007. Presentations from local NGOs attracted 180 employees, and a 4-lecture series by academics, including a lecture entitled “Climate Change and Response,” attracted an audience of 167.

*Executive Compensation* Individuals with job duties related to climate change, such as the PFC reduction program, are assessed on their progress through the annual performance appraisal system. It does not appear that senior executive remuneration is linked to climate change or energy initiatives.

---

## Public Disclosure

**Score: 9**

*Annual Report* The section on EHS Management in the 2007 annual report includes a discussion of GHG emissions management and abatement, especially of PFCs. TSMC notes that in 2005 it completed its first GHG inventory and earned ISO 14064 certification.

*Securities Filings* TSMC mentions its PFC reduction target in its 2007 Form 20-F, and notes that it has won an “Excellence in Voluntary Greenhouse Gases Emission Reduction Award” from the Taiwan Ministry of Economic Affairs.

*Other Disclosure* In its 2007 Corporate Social Responsibility report, TSMC references the IPCC findings and states that global climate change is its top environmental concern. The report discusses initiatives to reduce PFC emissions plus emissions from energy use as well as its green building program and efforts to educate employees on climate and energy matters.

**Sustainability Report:** FY07 TSMC Corporate Social Responsibility Report, June 2008

**URL:** [http://www.tsmc.com/english/a\\_about/a07\\_environmental/Annual\\_Report/0820tsmc-csr-e/all.pdf](http://www.tsmc.com/english/a_about/a07_environmental/Annual_Report/0820tsmc-csr-e/all.pdf)

**GRI Accordance:** GRI Index included; no self-declared G3 application level.

*Carbon Disclosure Project* Answered Questionnaire (Public)

# TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.

## CDP6 Risk Disclosure

TSMC discusses regulatory, physical and energy cost and availability risks in its CDP6 response. The company notes that as Taiwan is not a member of the UN it cannot become a signatory to the Kyoto Protocol, or use its flexible market mechanisms such as the CDM. The Taiwan government is in the process of drafting GHG regulations, and TSMC participates in the process as the representative of the Taiwan Semiconductor Industry Association. A carbon tax is one possibility as are emissions limits. Taiwan also plans to build a local carbon trading market. TSMC watches progress on legislation in other countries where its customers reside. Regulatory risks are managed by the central environmental and legal functions.

With regard to physical risks, TSMC has identified drought, supply chain disruption due to extreme weather events or sea level rise, and possibly the increased incidence of disease as its major risks. The company does not expect that sea level rise or floods will be a problem for its own facilities which are located well above sea level. Nor does it expect that its own facilities are at risk from severe storms since they have been built to withstand such events.

TSMC states that increased water and energy costs are being monitored, although right now costs only equal 3 percent of revenue. TSMC has an Enterprise Risk Management function with a committee that holds periodic meetings to identify and manage or mitigate risks. After the spring 2008 snowstorm in Shanghai, China which resulted in utility disruption, the company began to prepare Business Continuity Plans.

## Public Policy

TSMC engages with policymakers at the Taiwan EPA, the Industrial Development Bureau and the Bureau of Energy, directly if necessary, but mainly through the following associations:

- (1) The Science Park Association mostly organized by IC and FPD companies in Taiwan.
- (2) TSIA (Taiwan Semiconductor Industry Association)
- (3) Taiwan Electrical and Electronic Manufacturer Association
- (4) The Taiwan Business Council for Sustainable Development (BCSD-Taiwan)

TSMC does not state its preference for the format of climate change regulation in Taiwan or internationally.

## Emissions Accounting

Score: 15

GHG Emissions Inventory

Year: 2007

Facility/Region: Global

Protocol: ISO 14064-1

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	2,465,559
Scope 2 (Indirect –Electricity)	1,966,828
Scope 3	—
Travel	1,458
Logistics	—
Products	—
Supply Chain	1,551,335

# TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.

<i>Accounting Methods</i>	TSMC follows the IPCC guidelines. Employee business travel emissions are calculated by collecting the total miles traveled then making the assumption that the weight of one person plus luggage is 70 kg, and the airplane is Boeing-747. Then, TSMC consults ITRI (Industrial Technology Research Institute), and they calculate the emission data based on the emission factor reference to Boustead Model. An LCA determined that TSMC's supply chain emissions are 50 percent of its manufacturing emissions, which is how they are estimated.
<i>External Verification</i>	External verification is conducted by BSI. The verification covers TSMC's fabs in Taiwan (F2, 3, 3E, 5, 6, 8, 12, 14). In addition, data are verified by ISO14064-1:2006.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score: 13

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Absolute)</b>	<b>10%</b>	<b>1997 &amp; 1999 average</b>	<b>2010</b>	<b>Taiwan</b>
<i>Target Details</i>	TSMC set a target to reduce PFC emissions to 0.267 million metric tons carbon equivalent by 2010, which is 10 percent below the average emission value of 1997 and 1999. This reduction commitment is for all TSMC fabs in Taiwan.			
<i>Target Achievement</i>	TSMC expects to be able to reach its 2010 target and anticipates it will reduce PFC emissions by 70 percent. In 2007, the company reduced PFC emissions by 742,366 tons CO <sub>2</sub> e.			
<i>Energy Efficiency</i>	<p>TSMC has energy conservation programs in each existing facility. In its CSR report the company lists specific actions taken for clean room, air conditioning and other energy efficiency measures related to its fab facilities along with the GHG emissions reduction that resulted. The company also has a designated department responsible for energy conservation in its offices.</p> <p>TSMC will seek LEED certification for each new facility. The company's Green Building Program was launched in 2006 and to provide assistance, TSMC hired Dr. Kath Williams, former vice president of the US Green Building Council as a consultant. The company has achieved Gold standard certification for its new Fab 14. New facilities will also meet Taiwan's Ecology, Energy Saving, Waste Reduction and Health standard.</p>			
<i>Renewable Energy</i>	None identified.			
<i>Emissions Trading</i>	TSMC is considering participation in a voluntary carbon scheme in Taiwan. It may be the Voluntary Carbon Standard (VCS) pilot company for the Taiwan semiconductor industry.			
<i>Products &amp; Services</i>	TSMC states in its CDP6 response that it believes that climate change will spur demand for energy efficient products. The company currently offers its customers a power efficient design platform known as "Power Trim Service" which two customers have adopted. TSMC expects that Moore's Law, a semiconductor industry relationship which states that unit performance-to-power ratio doubles, will continue to hold true.			

# TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.

TSMC is also considering opportunities related to energy conservation beyond the wafer foundry business, although it states that a launch of new products will not compete with its customers. The company first needs to evaluate the expected ROI, judge appropriate market timing, and decide how to leverage its current business.

## *Research & Development*

None identified.

## *Supply Chain Management*

TSMC surveys and audits both upstream raw material suppliers and downstream testing and assembly facilities for environmental, health and safety. TSMC uses the results along with other data to prepare a supplier risk map that its procurement function can use in decision-making. TSMC aims to both reduce its supply chain risk and to reduce the environmental impact, including carbon emissions, of its products. The company will work with the top management of firms whose performance is found to be lacking, and will share best practices and provide on-site assistance for improvement.

As of 2008, TSMC requires key suppliers to conduct a GHG emission inventory, disclose results to TSMC and implement GHG reduction measures. TSMC is not currently participating in the CDP Supply Chain Leadership Collaboration but it will evaluate the program for future use.



Texas Instruments (TI) enhanced its climate change strategy in 2007 by conducting its first carbon footprint inventory and by formally linking energy conservation initiatives to its strategy. The company's climate strategy focuses on perfluorocarbon (PFC) emissions reduction and energy conservation in buildings and manufacturing equipment. However, there is little evidence of board or executive leadership with respect to climate change, and the company has not set greenhouse gas (GHG) emission reduction targets.

**Summary Score: 28**

## Company Information

TI was founded in 1930 but it first entered the semiconductor market in 1954. TI now has two business lines: semiconductors and education technology. The company employs approximately 30,400 people worldwide.

### Contact Information

**Chairman/CEO:** Richard K. Templeton

**Website:** [www.ti.com](http://www.ti.com)

**Address:** 12500 TI Boulevard, Dallas, Texas 75243, United States

## Board Oversight

**Score: 1**

### Board Committee/Member

Audit Committee.

### Board Role

TI's CDP response says the Audit Committee of the board is responsible for environmental performance and it receives briefings on relevant Environmental, Safety & Health (ESH) issues. It is not clear if the committee has been briefed on climate change matters. Climate change is not among the responsibilities mentioned in the audit committee charter.

### Board Training

None identified.

## Management Execution

**Score: 6**

### CEO Leadership

None identified.

### Company Strategy

TI advanced its climate change strategy in 2007 by completing its first carbon footprint and by officially tying energy reduction initiatives to its climate strategy. TI states that its decision to focus on reducing its climate impact through reducing PFC and energy use is one that balances sustainability with cost considerations. The company has committed to a 10 percent reduction of PFC emissions by 2010 from a 1995 baseline as part of the voluntary agreement via the World Semiconductor Council and with the US EPA. In addition to PFCs, TI plans to develop goals and policies for other GHGs.

Energy efficiency projects focus on reducing energy in manufacturing and on obtaining US Green Building Council's Leadership in Energy and Environmental Design (LEED) certification for new buildings and for all existing major facilities by 2011. TI also encourages telecommuting and ridesharing to reduce emissions from employee commuting.

# TEXAS INSTRUMENTS INC.

<i>Executive Responsibility</i>	TI says in its CDP6 response that it has teams that measure and manage climate change program performance but no further details are provided. The company's ESH principles state all employees are responsible for ESH matters as appropriate for their job function.
<i>External Initiatives</i>	TI has joined the US EPA PFC Reduction/Climate Partnership.
<i>Employee Training</i>	TI holds an annual campaign to educate employees about energy conservation opportunities and to encourage employees to explore new conservation measures.
<i>Executive Compensation</i>	None identified.

## Public Disclosure

Score: 4

<i>Annual Report</i>	No climate change mention. Climate change is not discussed in the company's 2007 annual report, although passing mention is made of energy efficient motors.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	<p>TI's web-based Corporate Citizenship report states that although the company's expertise is not climate science, the company acknowledges that climate change is an issue that requires additional action. The report discloses two years of carbon footprint data and five years of PFC data, and then continues to discuss GHG abatement actions including PFC reduction and building energy efficiency.</p> <p><b>Sustainability Report:</b> FY07 Texas Instruments Corporate Citizenship Report, 2007  <b>URL:</b> <a href="http://www.ti.com/corp/docs/csr">http://www.ti.com/corp/docs/csr</a>  <b>GRI Accordance:</b> Includes GRI Index; no self-declared G3 Application Level</p>
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	<p>While TI does not currently foresee any regulatory changes that would have a material impact, the company anticipates GHG regulations will directly or indirectly impact its operations in Japan and Germany in the next three years and in the US in the next five years. Potential future regulation of PFCs, HFCs and SF6 that are used in semiconductor manufacturing would pose a risk. In addition, TI states that electric utility regulation could result in increased costs passed along to energy consumers.</p> <p>TI says the most significant climate-related risk it faces is from severe weather events. The company has a Disaster Management Program at every site. TI says that an important component of its risk management system is to understand the financial impacts of regulation and severe weather events. The financial impact of regulation is assessed by corporate ESH experts while the impacts of physical events are assessed at each site. TI also states that increasing the energy efficiency of its products is "a competitive necessity" in the semiconductor industry.</p>
<i>Public Policy</i>	TI says it is just starting to look at public policy implications of climate change and that if needed it will respond to pending regulation through industry associations or independently. The company's process for "influence on public policy" is one of its ESH principles.

# TEXAS INSTRUMENTS INC.

## Emissions Accounting

Score: 5

GHG Emissions Inventory Year: 2007 Facility/Region: Global Protocol: Other

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	2,000,000*
Scope 2 (Indirect –Electricity)	—
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

\* Estimate of PFCs and SF6 in manufacturing and CO<sub>2</sub> from energy consumption at all major sites globally

**Accounting Methods** TI estimated CO<sub>2</sub>e emissions from its manufacturing sites and manufacturing equipment in part by using protocols and emissions factors from the EPA's Climate Leaders program and the 2006 Intergovernmental Panel on Climate Change. TI has not yet quantified all of its Scope 1, 2, and 3 emissions but it anticipates that it will have more robust emissions data available by 2010.

**External Verification** None identified.

**Certified CO<sub>2</sub> Offsets** None identified.

## Strategic Planning

Score: 12

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Absolute)	10% PFC reduction	1995	2010	Global

**Target Details** TI committed to reducing PFC emissions by 10 percent from a 1995 baseline by 2010, which was agreed to by the World Semiconductor Council and which formed the basis for a voluntary industry partnership with the US EPA. The company has also set a target to obtain LEED certification for all existing major facilities by 2011 and all new buildings will be LEED certified as well. TI has not yet set a CO<sub>2</sub> reduction target or decided on an appropriate baseline year.

**Target Achievement** As of 2007, PFC emissions had fallen from their peak 1999 levels by an estimated 48 percent, taking into account adjustments for production growth. TI's total energy use dropped by 1 percent in 2007 from the previous year.

**Energy Efficiency** TI aligned its energy conservation program to its climate strategy in 2007. The company has adjusted equipment use protocols to reduce energy use since manufacturing equipment is the largest energy user in its operations. Chiller optimization and the use of recovered waste heat to heat water and air has reduced energy consumption. The company has also replaced chillers and vacuum pumps with more efficient models and installed light sensors in its

conference rooms. TI has decided to obtain LEED certification for all new facilities it builds and for all existing major facilities by 2011.

TI encourages employees to telecommute or to participate in its commute solutions program which provides free mass transit passes to Dallas employees, carpool matching, on-site shuttles and vanpool subsidies. TI also provides on-site cafeterias and concierge service to reduce the need for employees to make other trips by car. The US EPA recognized TI as one of the "Best Workplaces for Commuters."

*Renewable Energy* TI reports that about 1.5 percent of incurred energy costs are from renewable sources.

*Emissions Trading* None identified.

*Products & Services* Although TI does not assess the potential financial implications of climate related opportunities, the company does expect that customer demand for energy efficient products will grow. TI says it is the leading provider of power management ICs and a top provider of embedded processing solutions for digital signal processing and ultra-low power. The company also notes that its components help improve the energy efficiency of household appliances, cars, industrial processes and mobile and wireless communications. The latter also improves the feasibility of telecommuting. TI also says that its products improve the accuracy of lab instrumentation, such as equipment use to collect and analyze climate change data.

*Research & Development* In 2007, TI engineers, working with Matros Technologies, developed an industry-specific catalyst that reduces fuel use and associated air emissions. TI anticipates that it will enable reductions of up to 49 percent of CO<sub>2</sub>e from the thermal oxidizers in which the catalysts are installed and reduce fuel costs by nearly \$900,000 annually.

*Supply Chain Management* Texas Instruments is working to establish, adopt and implement supplier corporate citizenship requirements within the next 12 months.

# INTERNATIONAL BUSINESS MACHINES CORP.

NEW YORK STOCK EXCHANGE – IBM  
Technology

IBM has had a long track record of environmental protection, reporting publicly on the company's impact and innovating to find new solutions for customers, particularly in the area of energy efficiency. The company has already met a suite of first generation greenhouse gas (GHG) emission reduction and energy conservation targets and has announced a set of new targets through 2012. Of particular note are IBM's innovations in product development – from data centers to microprocessors – but also the company's research collaborations on issues ranging from traffic congestion pricing systems to solar cell technology.

**Summary Score: 79**

## Company Information

International Business Machines (IBM) is the world's largest provider of computer products and services. The company makes mainframes and servers, storage systems and peripherals. In addition, IBM's growing services business now accounts for more than half of its sales. Its IT services arm is the largest in the world and the company is also one of the largest providers of both software and semiconductors. The company had approximately 420,000 employees as of December 2007.

### Contact Information

**Chairman/CEO:** Samuel J. Palmisano

**Website:** [www.ibm.com](http://www.ibm.com)

**Address:** New Orchard Rd., Armonk, NY 10504, United States

## Board Oversight

**Score: 8**

### Board Committee/Member

Directors and Corporate Governance Committee

### Board Role

IBM's Directors and Corporate Governance Committee, formed in 1993, is responsible for reviewing the company's policies and practices on corporate public responsibility, including protection of the environment. This committee reviews IBM's energy conservation and climate protection goals and performance annually. In addition, the entire Board of Directors receives a report on energy and climate goals and performance annually.

### Board Training

None identified.

## Management Execution

**Score: 17**

### CEO Leadership

CEO Samuel Palmisano agreed to invest in the company's "Project Big Green" initiative (discussed below in Products & Services), following an online brainstorming session in November 2006 that included thousands of employees, business and university partners.

### Company Strategy

IBM established its first corporate policy on environmental protection in 1971. The company has a comprehensive global environmental management system that governs IBM's operations worldwide, as well as specific programs and goals on energy conservation and climate protection. The company's 2006 *Environmental Report* states, "IBM has applied its technical and engineering expertise to voluntarily reduce emissions associated with its own operations and to help its clients by creating products and offering solutions that are increasingly energy efficient."

## INTERNATIONAL BUSINESS MACHINES CORP.

IBM's "carbon management hierarchy" starts with energy efficiency and resource conservation efforts, followed by the use of renewable, low CO<sub>2</sub>-emitting energy sources and the use of abatement technology to manage PFC emissions. A similar focus on energy efficiency is found across the company's product design efforts. In addition, in 2006, IBM updated its corporate-wide energy conservation goal, decoupling the measurements for energy conservation from renewable energy sourcing.

### *Executive Responsibility*

IBM's Corporate Environmental Affairs staff has responsibility for setting the company's overall environmental strategy and goals, including those for energy conservation and climate protection. IBM's Vice President, Corporate Environmental Affairs & Product Safety reviews the company's strategy, goals and performance with the Directors and Corporate Governance Committee of IBM's Board of Directors annually. Additionally, within operating units, IBM employees serve as team leaders for environmental affairs and all product design and development groups have an assigned employee to manage integration of product stewardship and environmental considerations.

### *External Initiatives*

IBM has been a member of the Business Environmental Leadership Council of the Pew Center on Global Climate Change since 2000. The company is also a charter member of the WRI Green Power Market Development Group, World Wildlife Fund's Climate Savers Program, US EPA Climate Leaders program, the Chicago Climate Exchange, and participates in the EPA Green Power Partnership and SmartWay Transport Partnership programs. IBM is also a founding member of the Green Grid and in April 2007 established the Intelligent Utility Network Coalition to accelerate the adoption of systems for monitoring and managing electric grids. Finally, the company has formed with The Nature Conservancy the Great Rivers Partnership, which will produce a new computer-modeling framework for major river basins around the world, also enlightening climate change adaptation considerations.

In January 2008, IBM also announced it was joining with the World Business Council for Sustainable Development and other companies to establish Eco-Patent Commons. The initiative will make public a suite of patents focused on innovations in environmental protection in manufacturing and business processes, including energy efficiency and pollution prevention technologies.

### *Employee Training*

IBM recently held an internal *Innovation that Matters* video contest for which employees submitted videos related to energy and environment practices with clients, at work and in their homes.

### *Executive Compensation*

IBM employees who have responsibility for the company's energy conservation and climate protection programs have the attainment of energy and GHG goals included as part of what IBM calls their "personal business commitments" and in their annual performance evaluations. These performance evaluations are used to determine both annual salary increases and bonus pay.

In addition, IBM has an IBM Chairman's Environmental Award recognition program, which it established in 1991. The purpose of this annual award is to encourage environmental leadership and strengthen integration of environmental affairs throughout IBM's business. In 2006, the program was modified to focus solely on energy conservation, energy efficiency and climate goals in IBM's operations, products and services. IBM's Chairman presented the 2007 award to the company's Systems & Technology Group.

# INTERNATIONAL BUSINESS MACHINES CORP.

## Public Disclosure

Score: 8

*Annual Report* In the introduction to IBM's 2007 Annual Report, the company mentions its green data center and energy efficiency solutions as a differentiator for the company in terms of infrastructure leadership.

*Securities Filings* In IBM's 2007 Form 10-K the company lists the following as Innovation Initiatives: "the design of smaller, faster and energy-efficient semiconductor devices; systems virtualization, Green Data Centers and the design of 'grid' computing networks that allow computers to share processing power."

*Other Disclosure* IBM has been producing an annual "IBM and the Environment Report" since 1990, including information on energy conservation and climate protection programs and performance. Similar information is also included in the company's annual corporate responsibility report and on IBM's Energy & Environment website ([www.ibm.com/ibm/environment](http://www.ibm.com/ibm/environment)).

**Sustainability Report:** 2007 Corporate Responsibility Report, December 2007

**URL:** [http://www.ibm.com/ibm/environment/annual/IBM\\_CorpResp\\_2006.pdf](http://www.ibm.com/ibm/environment/annual/IBM_CorpResp_2006.pdf)

**GRI Accordance:** G3 – A Self Declared

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* IBM expects to be less affected by GHG regulations compared to other companies and industries. The company mentions the EU 20/20 energy efficiency objective and the Australia Energy Efficiency Law as examples of regulations that may affect the cost and availability of energy for IBM's operations and supply chain. On the other hand, the company does not see itself exposed to any "unusual physical risks" due to climate change. One area that could be impacted is the company's semiconductor manufacturing, which is water intensive; however, the company has implemented water conservation programs.

*Public Policy* IBM says it does not engage directly in advocating for particular regulatory schemes on climate change, given the nature of its business and relative low exposure to GHG control measures compared to other industries. Instead, IBM says in its most recent Carbon Disclosure Project response that the company believes it "can best contribute by taking actions to demonstrate the feasibility and benefits of increasing efficiency, reducing emissions, and designing energy efficient products." The company shares its best practices in these areas with other companies, NGOs and policymakers.



# INTERNATIONAL BUSINESS MACHINES CORP.

## Emissions Accounting

Score: 11

GHG Emissions Inventory      Year: 2007      Facility/Region: Global      Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	599,470
Scope 2 (Indirect –Electricity)	2,265,648
Scope 3*	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

\* While IBM has business travel, logistics, products and supply chain programs in place to reduce GHG emissions, the company has not specifically quantified any Scope 3 emissions to date.

**Accounting Methods** IBM's emissions inventory applies to all facilities owned and leased globally which support operations. The company uses the GHG Protocol and the US EPA Climate Leaders GHG Inventory Guidance. Factors for PFC global warming potentials are taken from the IPCC 2nd assessment protocol.

**External Verification** IBM's emissions inventories are audited three ways: 1) by FINRA (formerly NASD) under participation in the Chicago Climate Exchange (Canada, Mexico and the US), 2) by the US EPA Climate Leaders program (Global), and 3) by Bureau Veritas Certification as part of IBM's ISO 14001 global facility audits.

**Certified CO<sub>2</sub> Offsets** None identified.

## Strategic Planning

Score: 35

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Absolute)	12%	2005	2012	Global
Energy Use	3.5% in savings	—	Annual	Global

**Target Details** IBM has set a number of second generation GHG emission reduction goals after surpassing its original goal. The company's main goal is to reduce CO<sub>2</sub> emissions associated with energy use by 12 percent between 2005 and 2012. Other goals include:

- Reduce PFC emissions, which are potent greenhouse gases, from semiconductor manufacturing 25 percent by 2010 against a base year of 1995, consistent with that of the World Semiconductor Council goal. This is a second generation goal after the company met a goal in 2002 to reduce PFC emissions by 40 percent also against a 1995 baseline.
- As part of the US EPA Climate Leaders (Phase II) goal, reduce total global GHG emissions by 7 percent from 2005 to 2012.
- As part of the Chicago Climate Exchange Phase II program, reduce CO<sub>2</sub> and PFC emissions in North America by 6 percent by 2010 as measured against the annual average direct and indirect emissions for the period of 1998 to 2001.

## INTERNATIONAL BUSINESS MACHINES CORP.

In addition, IBM has set a goal to complete energy conservation projects that would save, on an annual basis, the equivalent of 3.5 percent of that year's energy usage by the company. This goal has been in place since 1996 and was updated for 2007; it also only recognizes real reductions and not downsizings or cost avoidance actions, such as fuel switching and off-peak load shifting. The company's semiconductor manufacturing operations have also established annual water conservation targets.

### *Target Achievement*

Between 1990 and 2005, IBM reduced or avoided CO<sub>2</sub> emissions by an amount equivalent to 40 percent of its 1990 emissions through its global energy conservation program. The company also achieved its initial US EPA Climate Leaders goal by reducing total global energy-related GHG emissions by an average of 6 percent per year and PFC emissions by 58 percent from 2000 to 2005. However, between 2006 and 2007 IBM's net CO<sub>2</sub> emissions increased by 5 percent as a result of business growth. Against the 2005 base year, IBM has increased its CO<sub>2</sub> emissions by 1.7 percent to date.

### *Energy Efficiency*

IBM's energy management team is responsible for driving energy efficiency initiatives across the company's operations. Energy conservation efforts saved \$19.3 million in 2007 while conserving energy equal to 3.8 percent of total consumption versus the corporate goal of 3.5 percent. These projects avoided approximately 77,000 metric tonnes of CO<sub>2</sub>e. In 2006, energy conservation projects reduced or avoided 3.9 percent of consumption, saving \$18.6 million and avoiding 98,000 metric tonnes of CO<sub>2</sub>e. Over the longer term, from 1990 to 2007 energy conservation projects at IBM cumulatively reduced or avoided 10.4 million metric tons of CO<sub>2</sub> emissions and saved approximately \$1 billion.

Key energy efficiency initiatives in 2007 include:

- Establishing global best practices teams and checklists for lighting, HVAC, Central Utility Plant, and data center systems. Based on the checklist analysis, IBM committed \$9 million, in each of 2007 and 2008, of dedicated capital to identified energy conservation projects.
- Expanding its re-commissioning program for existing facility building management systems. From 2003 to 2006, IBM re-commissioned 2.6 million square feet of space, achieving annual savings of 17,000 MWh and \$917,000. In 2007, an additional eight locations were evaluated and 25 new sites will be evaluated in 2008.
- Performing thermal profiling and assessment using the IBM-developed Mobile Monitoring Technology (MMT) at three data centers in the US and Canada. These assessments identified opportunities for over 0.6 MW (6 percent capacity reduction) demand reduction and a corresponding usage reduction of over 5500 MWh per year (11 percent use reduction).

For the company's own data centers, the IBM technology delivery team also announced plans to double their computing capacity within the next three years without increasing power consumption or their carbon footprint. Compared to doubling the size of its data centers by building out new space, IBM expects this will help save more than five billion kWh of energy per year. IBM will also consolidate about 3,900 computer servers onto about 30 System z mainframes running the Linux operating system, which is expected to reduce energy consumption by approximately 80 percent.

# INTERNATIONAL BUSINESS MACHINES CORP.

IBM also has several programs in place to reduce employee travel. Over 100,000 employees participate in the company's work at home and mobile employee programs. In the US alone, IBM estimates that its work at home program avoided approximately 64,000 metric tons CO<sub>2</sub> in 2007. Globally, the company also provides support for the use of public transit, alternative transport and high mileage leased vehicles. Finally, IBM uses several IT collaboration tools, such as web and video conferencing, to reduce employee business travel. IBM has received numerous awards dating back to 1998 from the US EPA and others for its energy efficiency and climate protection efforts.

## *Renewable Energy*

IBM is a charter member of the WRI Green Power Market Development Group and through this group purchased over 96,000 MWh of Renewable Energy Certificates (RECs) in the US in 2006 and 2007. The company ranked 12th on the US EPA's Fortune 500 list of Green Power Partners for 2007. The company also reports in its most recent Carbon Disclosure Project response that global purchases of renewable energy grew by 24 percent between 2006 and 2007, increasing from 368,000 MWh to 455,000 MWh. These purchases represented 8.5 percent of the company's 2007 global electricity use.

## *Emissions Trading*

IBM became a charter member of the Chicago Climate Exchange in 2003 and registered its North American GHG inventory in order to gain practical experience in a cap and trade system. The company has extended its membership through 2010 and engaged in limited trading on the exchange, but expects to meet its voluntary CCX emission reduction commitment without having to trade any credits. In addition, IBM has one facility in Ireland and four facilities in the UK covered under Phase I of the EU ETS. The company says that management of the EU ETS allocation has not had a material impact on facility operating costs.

## *Products & Services*

IBM established a formal Product Stewardship program in 1991, focusing on product design for environment and product energy efficiency. The company's innovations have ranged from energy efficient hardware and software solutions and intelligent transportation and utility systems to solar farm technology and consulting services on carbon management. In May of 2007, IBM announced "Project Big Green" to further expand its data center and product energy efficiency goals, as well as to leverage IT expertise for water management projects. The initiative is redirecting \$1 billion per year across the company's businesses to increase energy efficiency in IT. As one example, new generations of hardware products have achieved improvements ranging from 14 to 73 percent in computing performance per unit of energy in 2007.

IBM offers several products specific to energy management and technology. Beyond virtualization services, Active Energy Manager is a hardware/software tool that enables customers to meter and control power usage on an individual server, while Tivoli management software allows for energy management across a data center. In its Cool Blue portfolio, technology solutions include Calibrated Vector Cooling and Rear Door Heat Exchanger for server systems, as well as high efficiency power supplies. The company also continues to innovate in processor level power management and energy efficiency solutions. IBM's newest POWER6 chip doubles performance at virtually unchanged power usage.

# INTERNATIONAL BUSINESS MACHINES CORP.

The company's Data Center Power Management solutions combine hardware/software solutions with IT and facilities integration and control systems. Services for existing and new data center planning include:

- Data center thermal assessment
- Data Center and Facilities Strategy Services
- IT Facilities Assessment, Design and Construction Services
- IT Facilities Consolidation and Relocation Services
- Specialized Facilities Services – includes intelligent and green building construction and facility management control systems

## *Research & Development*

IBM is applying its research and IT expertise to several environmental challenges, including the intelligent energy grid, smart transportation systems, biofuel development, energy and material use optimization and logistics planning. As one example, the company worked with the city of Stockholm, and previously with Singapore, to provide traffic management and congestion pricing systems. IBM also has a specific "Alternative Energy Research Program" currently working on photovoltaic research and low energy membranes for batteries, water filtration and other applications. In May 2008, the company announced a breakthrough in using its nanotechnology and semiconductor expertise to cool concentrator photovoltaic (CPV) cells, a technology that could significantly reduce the cost of generating solar electricity if commercialized.

## *Supply Chain Management*

In conjunction with its participation in the Electronics Industry Citizenship Coalition, IBM is participating in a working group to develop a common approach that the electronics industry could use to encourage suppliers to inventory and reduce their GHG emissions. IBM is also participating in the Carbon Disclosure Project Supply Chain Leadership Collaboration by querying a selected sample of its suppliers on energy use and GHG emissions. In May 2008, IBM introduced the Carbon Tradeoff Modeler analysis tool that allows companies to analyze and manage the climate impact of their supply chains. The tool allows organizations to understand the outcome of critical tradeoffs to make smarter energy choices and better economic decisions by optimizing on service levels, quality, cost and CO<sub>2</sub> emissions.

In terms of logistics, the IBM Global Logistics team has been working on optimizing operations through several initiatives. IBM is a participant in the US EPA SmartWay Transport program and more than 80 percent of North American shipments are transported by SmartWay partners. Specific SmartWay requirements have also been extended to global distribution operations. The team has also reduced warehouse space and shifted some shipments to more efficient ground and ocean transport.

IBM's package design team now factors transport modes, fuel efficiencies and other options resulting in fewer CO<sub>2</sub> emissions into the early stages of the package development cycle. The team has introduced new packaging systems reducing weights for three product types by over 180 tonnes. The team is focusing on the packaging design for both IBM products and those of its suppliers.

In September 2007, Dell became the first major computer manufacturer to commit to neutralizing the carbon impact of its worldwide operations. The company announced in August 2008 that it had achieved carbon neutrality through a strategy of first driving additional energy-efficiencies, maximizing purchases of renewable power and then offsetting remaining impacts. Of particular note to Dell's success have been leadership from CEO Michael Dell, a long history of collaborating with industry partners on product energy efficiency initiatives, and engagement with suppliers on climate change issues.

**Summary Score: 77**

## Company Information

Dell Inc. is a technology company offering a range of products, from desktop personal computers and servers to software and services, to both the consumer and enterprise markets. Although Dell is the world's top direct-sales computer vendor, the company also began selling through retail stores in 2007. Dell's growing services unit provides systems integration, support and training. The company has approximately 79,900 employees.

### Contact Information

**Chairman/CEO:** Michael Dell

**Website:** [www.dell.com](http://www.dell.com)

**Address:** 1 Dell Way, Round Rock, Texas 78682, United States

## Board Oversight

**Score: 6**

### Board Committee/Member

Governance and Nominating Committee

### Board Role

The Governance and Nominating Committee oversees Dell's implementation of sustainable business practices, including the company's strategies related to climate change.

### Board Training

None identified.

## Management Execution

**Score: 19**

### CEO Leadership

Chairman and CEO Michael Dell has led the company's commitment to make Dell the world's greenest IT company. Michael Dell sits on the company's Sustainability Council to address overall sustainability issues and states in his introductory letter to Dell's 2008 Corporate Responsibility Report, "More than ever before, we are integrating consideration of the environment into our business processes and product design to deliver the industry's most energy-efficient products, save energy and deploy green power at our own facilities, and maintain our recycling leadership."

Michael Dell also spoke at the April 2008 FORTUNE Brainstorm: GREEN industry event. He said, "Ten years from now, we will look back and credit 'green' IT for helping to mitigate the effects posed by climate change, strengthen global industries and chart a new and prosperous low-carbon economy. It's a historic opportunity that we must act on now."

### Company Strategy

Dell has a strategic framework to address climate change that takes into account Product, Operational and Supplier impacts. The company has adopted a comprehensive strategy that integrates efficiency considerations into each stage of the product lifecycle and includes commitments to:

- aggressively focus on efficiency improvement opportunities;
- be the first computer company to achieve carbon neutral operations, by the end of calendar year 2008;
- partner with customers in energy conservation and climate renewal;
- continue operational, product and supply chain leadership, and
- recommit efforts to improve sustainability governance.

Dell has also announced a goal to become the “greenest technology company on the planet.” This includes a commitment to become carbon neutral in 2008. The company’s carbon neutrality goal will apply to Scope 1 and 2 greenhouse gas (GHG) emissions from all facilities worldwide and business air travel.

#### *Executive Responsibility*

Dell’s Sustainability Council meets quarterly to review and approve strategies, monitor progress and address risk on all sustainability issues, including climate change. The Council is led by Dell’s Corporate Sustainability Director and is represented by leaders from Dell’s Product Group, Facilities and Manufacturing operations, Logistics, Services and Worldwide Procurement organizations. CEO Michael Dell also sits on the Council. Examples of topics recently reviewed include the company’s carbon neutrality strategy and its multi-year plan to reduce the carbon intensity of its operations. Dell also hired a VP of Corporate Responsibility in 2007 to oversee Sustainability, Diversity and Philanthropy.

#### *External Initiatives*

Dell has helped to establish and lead several programs in the US, including Green Grid, ENERGY STAR and EPEAT (Electronic Product Environmental Assessment Tool). Additionally, Dell played a key role in facilitating a new relationship between the Green Grid consortium and the US EPA, resulting in an MOU between these organizations to collaborate on a data center best practices project. Dell is also a founding member of the EPA’s recently launched ENERGY STAR Low Carbon IT program and participates in the Climate Savers Computing Initiative and The Climate Group.

#### *Employee Training*

Dell employees have launched several Green Teams across different offices focused on ways to promote recycling, minimize energy use and drive efficiency. Dell is also launching a Global Green Team program where all sites can customize a local website, share ideas globally and the leaders can meet to discuss goals and progress.

#### *Executive Compensation*

Facilities and operations, product teams and operations teams are evaluated on climate change-specific performance metrics that affect compensation.

## Public Disclosure

**Score: 10**

#### *Annual Report*

Dell’s *Fiscal 2008 in Review*, the company’s annual report, includes a section entitled “A Sustainable Advantage.” The company highlights its recent carbon neutrality commitment, programs for customers to offset the carbon impact of using Dell products and product efficiency and recycling efforts.

#### *Securities Filings*

In the Business section of Dell’s 2007 Form 10-K, the company includes a Sustainability section that discusses Dell’s environmental stewardship program. The company mentions several climate change related initiatives, including a commitment to become carbon neutral in 2008.



**Other Disclosure** The Dell Earth website contains in-depth information on environmental policies and programs, as well as an “energy counter” that estimates the accumulated energy and carbon savings impact enabled by Dell Energy Smart products and services. Dell’s fiscal year 2008 Corporate Responsibility Report includes a section on Climate Leadership that outlines the company’s strategy to address climate change and includes several third-party stakeholder commentaries.

**Sustainability Report:** *FY2008 Corporate Responsibility Report*, July 2008  
**URL:** <http://www.dell.com/downloads/global/corporate/enviro/report2008.pdf>  
**GRI Accordance:** G3 B GRI-checked

**Carbon Disclosure Project** Answered Questionnaire (Public)

**CDP6 Risk Disclosure** With small Scope 1 emissions, Dell states that it does not foresee being subject to mandated emissions caps or other regulatory risks that would materially affect profitability. However, Dell notes the possibility of being impacted by increased electricity costs and product costs related to energy efficiency requirements. Dell also discusses in detail potential impact from increases in extreme weather events and changes to predicted weather patterns. Such changes could affect heating and cooling requirements of buildings, as well as the financial stability of global suppliers and customers.

**Public Policy** Dell states in its CDP6 response that the company “strives to bring innovative ideas to policy debates, as well as raise awareness of new issues that can provide mutual benefit to our business and to society.” Dell was engaged directly, as well as through industry groups, to educate legislators on proposals relating to IT that ultimately became part of the “The Energy Independence and Security Act of 2007” signed into law in late 2007. Chairman and CEO Michael Dell also said in a January 2007 interview with *TIME* magazine when asked about government action on climate change, “My belief is that when you have companies competing to do the right thing, you get a better result than when the government takes the lead.”

Dell is also engaged with the EU regulators and standards development bodies on the EuP (Energy Using Products) Directive and Data Center Code of Conduct development activities, as well as with several other countries on policy development and harmonizing product standards.

## Emissions Accounting

**Score: 14**

*GHG Emissions Inventory*

**Year:** FY2008

**Facility/Region:** Global

**Protocol:** GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
<b>Scope 1 (Direct)</b>	<b>35,128</b>
<b>Scope 2 (Indirect –Electricity)</b>	<b>403,210*</b>
<b>Scope 3</b>	—
Travel	51,747
Logistics	—
Products	—
Supply Chain	—

\* Net Scope 2 emissions considering renewable energy purchases from utility providers (contractual renewable energy) were 389,700 metric tonnes CO<sub>2</sub>e.



# DELL INC.

<i>Accounting Methods</i>	Dell calculates its corporate-wide emissions using the Climate Leaders GHG Inventory Guidance, which is based on the GHG Protocol.
<i>External Verification</i>	Dell's emissions inventory has been externally verified by ICF International.
<i>Certified CO<sub>2</sub> Offsets</i>	As part of its commitment to become carbon neutral starting in 2008, Dell says it will offset remaining Scope 1 and 2 emissions and business air travel emissions using "certified or other high quality, renewable energy credits and validated offsets."

## Strategic Planning

Score: 28

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Intensity)</b>	<b>15% carbon intensity</b>	<b>2006</b>	<b>2012</b>	<b>Global</b>

*Target Details* Dell has pledged to reduce carbon intensity by 15 percent by 2012, and to become carbon neutral starting in 2008. The carbon neutral pledge for the company's operations extends for five years. Internal targets for achieving energy use reduction have been established for each region.

*Target Achievement* Dell announced in August 2008 that its worldwide operations had become carbon neutral, a goal originally set to complete by the end of the year. Dell met its goal early by implementing a global energy efficiency campaign and increasing purchases of green power, verified emission reductions and renewable energy certificates. The company has increased green electricity purchases from utility providers, made investments in wind power in the US, China and India (avoiding more than 400,000 metric tons of CO<sub>2</sub>e) and partnered with Conservation International on a habitat and forest preservation initiative in the Republic of Madagascar.

Dell has also set a goal to reduce GHG emissions via Dell products and services by 25 million tons through improved product performance. Since announcing this initiative, Dell has avoided more than 21 million tons of CO<sub>2</sub> through energy efficient products and solutions.

*Energy Efficiency* During the last two years, Dell has upgraded lighting, and IT, HVAC and manufacturing equipment to reduce electricity consumption, with individual projects ranging from \$15,000 to more than \$1.5 million. Data centers are the company's largest source of energy use. Dell expects recent upgrades to a small data center at its Ireland facility to reduce energy use, and costs, by 50 percent over similar data centers. Dell is also focused on becoming more efficient with the space needed to operate. The company is investigating alternative work-at-home employment options to reduce office space and energy use. Dell says that efficiency projects to date have annual savings of approximately \$3 million a year, or about 5 percent of its annual energy bill. The company also has a goal to double the "greenness" of its buildings based on the US Green Building Council's LEED scoring system.

To assess opportunities, Dell has established a capital fund specifically to fund operational sustainability and energy efficiency projects. The company's Global Energy Management Program office evaluates project proposals, selects those to be funded and monitors project

energy and carbon savings. The overall capital fund is approved by the Facilities Steering Committee, a group comprised of key Executive Leadership Team members.

## *Renewable Energy*

Dell purchases renewable energy directly from utilities for approximately 20 percent of its energy needs. Late in fiscal year 2008, Dell increased the amount of green power purchased from utility providers to 81,000 MWh per year, which represents enough power to serve its entire headquarters campus in Round Rock, TX in fiscal year 2009. The green power mix includes 32,000 MWh from a landfill gas-to-electricity project in Austin, TX, where Dell is purchasing 100 percent of the output. The remainder of the purchased green energy comes mainly from wind sources, through certified and other high-quality renewable energy credits. Since 2004, the company's annual investment in green electricity from utility providers has grown from 12 million kWh to 116 million kWh, an increase of nearly 870 percent.

## *Emissions Trading*

Dell currently has EU manufacturing facilities in Ireland and Poland; however neither have emissions significant enough to require participation in the EU ETS. The company has no plans at this time to participate in any regional or international trading schemes.

## *Products & Services*

Through Dell's Design for the Environment Program, the company integrates environmental attributes into each aspect of the product life cycle. Dell has actively participated in the US EPA's ENERGY STAR program for more than a decade, and several of Dell's workstations, desktops and laptops met Energy Star 4.0 standards ahead of a deadline set by the EPA. In fiscal year 2007, Dell started Energy Smart, a program similar to ENERGY STAR that covers additional product categories. The company's latest OptiPlex desktop systems are preconfigured with the Energy Smart settings, and Dell estimates that applying these setting to all Dell desktops sold within the past year could avoid approximately 12.5 million tons of CO<sub>2</sub> emissions.

Dell also allows customers to offset carbon impact related to product energy use through the "Plant a Tree for Me" and "Plant a Forest for Me" programs. In 2003, Dell launched the Energy Management Solutions Center online to educate consumers on efficiency in PC usage and the company's Power Calculators help customers optimize energy and thermal efficiencies.

For data centers, Dell offers Energy Smart Data Center Assessment and Design services to optimize customers' data center facilities and IT infrastructure for power consumption, performance, reliability and availability. Dell performs assessments and develops remediation plans to reduce energy use in customer HVAC and power delivery systems. Dell also provides an online tool for customers to plan their data centers to use the latest energy efficiency and computing technology to accommodate capacity growth. Dell is also focused on supporting services for virtualization, or the consolidation to fewer, higher performing servers through Dell Cloud Computing Solutions (DCS) and the company's Virtualization Readiness Assessment Service.

## *Research & Development*

The Dell Energy Smart Research Center in Austin, Texas works with vendors and customers that want to validate or develop custom energy efficient solutions. Customers and vendors test different HVAC, power delivery and airflows on a range of IT deployments and workloads to identify efficient solutions. Dell's product group also conducts research with a team of environmental technologists and engineers to identify environmental leadership technologies in energy efficiency and power management, product and packaging materials and end of life

considerations. Dell utilizes life cycle assessment, partnerships with academic institutions and internal pilots to identify and validate design improvements for various products and services.

## *Supply Chain Management*

Dell has set expectations for suppliers to manage, improve and publicly report their GHG impacts as a consideration for awarding business. The company has set business requirements for its Tier 1 suppliers (more than 80 percent of Worldwide Procurement spend) to publicly report their GHG emissions during Quarterly Business Reviews. Suppliers must identify GHG emissions as an environmental impact within their ISO 14001 or the EU's Eco-Management and Audit Scheme (EMAS) plan. Dell is also working to establish baseline GHG emission expectations at a commodity level, which will allow the company to set quantitative targets and supplier performance expectations in the future.

Furthermore, Dell was the first IT company to join the Carbon Disclosure Project's Supply Chain Leadership Collaboration to help suppliers with emissions reporting and received a 100 percent response rate from 40 suppliers asked to participate in a pilot questionnaire. Dell is also participating in supply chain GHG guidance development activities with the US EPA, The Climate Group, The World Resources Institute and Business for Social Responsibility in conjunction with the Electronic Industry Code of Conduct. In 2007, Dell hosted an Asia Climate Impact Supplier Summit in Taipei to educate suppliers on the company's climate strategy.

In terms of packaging, the Worldwide Packaging Engineering team is responsible for optimizing the use of packaging throughout Dell's supply chain. Over the past four years 85 million pounds of packaging material have been reduced – leading to fewer vehicles and lower emissions.

Dell's Global Logistics Team is also working with carriers to improve overall efficiency. Dell has set goals to reduce the GHG emissions of its freight operations by increasing the percentage of freight shipped through SmartWay Transport Partnership carriers. In fiscal year 2008, Dell consolidated its supplier inventory to four strategic locations in China, engaged its inbound transportation partners on environmental practices and explored the use of foam instead of wooden pallets. Dell also has several domestic outbound logistics programs underway to address resource conservation and logistics network optimization.

Sun Microsystems has emerged as a leader in promoting the link between action on climate change and business success. The company launched its Eco Responsibility initiative in 2005 and a comprehensive Eco Innovation initiative in 2007 focused on bringing energy efficiency solutions to its customers. A key feature of Sun's approach is transparency and the sharing of best practices, including publishing monthly carbon emissions data on its website. Sun says in its 2007 Corporate Social Responsibility Report, "We believe that sustainability can't be proprietary." Sun has not yet tackled measuring the carbon footprint of its entire supply chain, but plans to make this a priority going forward.

**Summary Score: 63**

## Company Information

Sun Microsystems provides network computing infrastructure solutions. A leading maker of UNIX-based servers used to power corporate computer networks and websites, Sun also makes workstation computers and storage systems. Sun also has a wide-ranging software portfolio, including Java, a programming language used to create applications for computers, web browsers and other consumer electronic devices. At the end of fiscal 2007, the company had approximately 34,000 employees. The company owns and operates three manufacturing facilities, while the rest of its manufacturing is outsourced to suppliers and contractors.

### Contact Information

**Chairman:** Scott G. McNealy

**CEO:** Jonathan I. Schwartz

**Website:** [www.sun.com](http://www.sun.com)

**Address:** 4150 Network Circle, Santa Clara, CA 95054, United States

## Board Oversight

**Score: 2**

### Board Committee/Member

Corporate Governance and Nominating Committee

### Board Role

The Corporate Governance and Nominating Committee is responsible for reviewing matters of corporate responsibility performance, such as environmental issues. However, there is no specific mention of oversight of climate change issues in the committee's charter.

### Board Training

None identified.

## Management Execution

**Score: 13**

### CEO Leadership

In March 2007, CEO Jonathan Schwartz signed a "Climate Call to Action" organized by Ceres and the Investor Network on Climate Risk. The letter calls on US lawmakers to enact strong federal legislation that reduces GHG emissions. Schwartz has also spoken publicly about the need for industry standards and collaborative efforts to address climate change, including at a TechNet Innovation Summit at UC Berkeley in October 2007. Schwartz is also quoted on the company website as saying, "It's more obvious each day that extreme efficiency is good for the environment and great for business. Customers want this same eco responsibility in their datacenters."

### Company Strategy

Sun launched its Eco Responsibility initiative in November 2005. The company says its current responses to climate change fall within three main categories: Innovate, Act, and Share.

# SUN MICROSYSTEMS, INC.

- In terms of innovation, Sun is engineering its products to be more energy efficient and lessen their overall life cycle impacts. Sun is also focused on developing services to help customers reduce the energy and carbon impacts of their information technology infrastructure.
- Sun is acting to reduce the carbon emissions from its own operations through energy efficiency and renewable energy measures, as well as by developing environmentally responsible procurement and other policies. Sun is working to continually improve the quality and comprehensiveness of its carbon emissions inventory, particularly as it relates to Scope 3 emissions.
- Finally, Sun shares information about the company's climate change impacts and has made public commitments to reducing those impacts. The company also promotes sharing of sustainability best practices through its open source strategies (see External Initiatives below for information on the company's OpenEco.org website).

*Executive Responsibility* In April 2008, Dave Douglas, former Vice President of Eco Responsibility, was named Sun's Chief Sustainability Officer reporting directly to CEO Jonathan Schwartz. He retains his overall responsibility for Sun's sustainability initiatives, including the company's response to climate change.

*External Initiatives* Sun recently launched OpenEco.org, a global online community that provides free tools to help assess, track and compare business energy performance, share best practices to reduce GHG emissions and encourage sustainable innovation. Sun also participates in the following industry associations: Business Council on Climate Change, Climate Savers Computing Initiative, Confederation of British Industry's Climate Change Task Force, Corporate Leaders Group on Climate Change – UK and EU, US EPA Climate Leaders, Global e-Sustainability Initiative, Electronic Industry Citizenship Coalition, Green Grid (board member) and Transforming Energy & Markets. Sun is a signatory to the Bali Communique.

*Employee Training* Sun provides regular communication to employees on conservation and energy-saving tips. The company's My Eco Idea email is used for employees to send ideas to the Eco Responsibility team. An Employee CSR Advisory Board has also been established to provide feedback on CSR programs. In January 2008, Sun hosted an employee eco summit to engage employees on a range of sustainability activities and to launch an internal campaign, "Every job is an Eco Job," which encourages employees to find the "eco" in the jobs they already have at Sun. Resulting videos were posted on Channel Sun, an internal website and some videos will also appear in Sun's 2008 CSR report.

*Executive Compensation* None identified.

---

## Public Disclosure

Score: 10

*Annual Report* Sun does not issue a separate annual report; relevant information can be found in the company's annual Form 10-K.

*Securities Filings* In the Business Strategy section of Sun's 2007 Form 10-K, the company outlines its Environmentally Responsible Products and Business Practices as a cornerstone of its business strategy. Sun states, "We are innovating to develop products and programs that reduce

## SUN MICROSYSTEMS, INC.

energy needs and carbon dioxide production at all levels including microprocessors, servers, thin clients and computer grids.” The company also highlights a partnership with Pacific Gas & Electric to offer California customers an energy incentive rebate when upgrading server technology.

### *Other Disclosure*

The Eco Responsibility section of Sun’s 2007 Corporate Social Responsibility Report provides extensive detail on the company’s efforts to manage its carbon footprint and offer eco innovation solutions, as well as programs related to product take back, waste management, environmental management and eco awareness. Sun’s website also covers these issues in-depth with several resources available to share best practices.

Sustainability Report: *2007 Corporate Social Responsibility Report*, October 2007

URL: <http://www.sun.com/aboutsun/csr/report2007/index.jsp>

GRI Accordance: G3 Self-declared Level C

### *Carbon Disclosure Project*

Answered Questionnaire (Public)

### *CDP6 Risk Disclosure*

Sun states in its CDP6 response that given the scope of the company’s GHG emissions, it is unlikely to be directly regulated under current or proposed climate change legislation in the US and other countries. Instead, the company may feel an impact from higher energy costs and increased demand for low-power products. Specifically, Sun mentions product energy efficiency standards and possible labeling requirements related to a product’s lifecycle.

The company also recognizes that its “revenue and financial condition could be adversely affected by natural disasters and other business disruptions related to climate change.” The company notes that facilities near coastlines, such as those in Menlo Park, California, could be adversely impacted by sea level rise. Sun also says that it has not yet instituted a formal process for conducting a climate change-specific risk assessment, but that as its climate strategy matures financial and other risk assessments will become more feasible.

### *Public Policy*

On November 19, 2008, Sun joined with four other US companies and Ceres to launch a new business coalition calling for strong US climate and energy legislation in early 2009 to spur the clean energy economy and reduce GHG emissions. The Business for Innovative Climate and Energy Policy (BICEP), whose founding members also include Levi Strauss & Co., Starbucks, Nike and The Timberland Company, was launched to emphasize the importance of addressing climate change across all sectors of the economy. The group’s key policy recommendations include stimulating renewable energy, promoting energy efficiency and green jobs, requiring 100 percent auction of carbon allowances, and limiting new coal-fired power plants to those that capture and store carbon emissions.

Sun says in its 2007 CSR report that climate change has become a key challenge for governments around the world. The report notes, “Governments play an essential role in achieving sustainable development by helping to shape industries and markets. They’re uniquely positioned to bring transparency to consumers seeking product-related environmental information and, due to their size, can have significant influence on advancing green procurement.” During fiscal 2007, Sun engaged in the following ways:



# SUN MICROSYSTEMS, INC.

- Contributed to the US EPA Report to Congress on energy efficiency of servers and datacenters, the result of legislation Sun helped develop in fiscal 2006 and the basis for further legislation to encourage greater adoption of energy-efficient servers and datacenters
- Participated in the Efficient Servers project, run under the EU program Intelligent Energy Europe, which publishes case studies and guidelines to promote market development for energy-efficient servers
- Provided guidance to the Speaker of the House and the Chief Administrative Officer for the US House of Representatives in their Greening the Capitol Initiative, a program designed to improve the energy efficiency and diminish the environmental impact of federal office buildings
- Sponsored and drove activities of the Global e-Sustainability Initiative (GeSI) EU ICT Sustainability Forum

Additionally, in March 2007, CEO Jonathan Schwartz also signed a “Climate Call to Action” organized by Ceres and the Investor Network on Climate Risk. The letter calls on US lawmakers to enact strong federal legislation that reduces GHG emissions and asks the Securities and Exchange Commission to clarify what companies should disclose to investors on climate change in their regular financial reporting.

In November 2007, Sun signed the Bali Communiqué calling for a comprehensive, legally-binding United Nations framework to tackle climate change.

## Emissions Accounting

Score: 12

GHG Emissions Inventory

Year: 2007

Facility/Region: US only

Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	11,834
Scope 2 (Indirect –Electricity)	190,220
Scope 3	—
Travel	84,899*
Logistics	—
Products	—
Supply Chain	—

\* Not included in official corporate inventory for EPA Climate Leaders; based on travel agent estimates for business travel including air, rail and automobile travel, as well as hotel stays.

Accounting Methods

Sun calculates its corporate-wide emissions using the Climate Leaders GHG Inventory Guidance, which is based on the GHG Protocol. The company has also reported Scope 1 and 2 emissions for some non-US operations for 2006 (U.K., France, Ireland, Germany and Sweden).

External Verification

EPA's Climate Leaders program continually reviews Sun's emissions inventory data and reduction target progress. EPA performs desktop reviews of both the inventory data and Sun's Inventory Management Plan, as well as a risk-based on-site review to ensure that the Management Plan is being implemented at the facility level.



# SUN MICROSYSTEMS, INC.

## Certified CO<sub>2</sub> Offsets

Sun says it has decided not to use carbon offsets as part of its carbon management plan at this time and instead will focus on internal energy efficiency and emissions reduction projects.

## Strategic Planning

Score: 26

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions (Absolute)</b>	<b>20%</b>	<b>2007</b>	<b>2015</b>	<b>Global</b>
<b>Energy Efficiency</b>	<b>3%</b>	<b>FY2007</b>	<b>FY2008</b>	<b>All buildings</b>

### Target Details

Sun joined the US EPA Climate Leaders program in 2003 and set its first GHG emission reduction target for a 20 percent reduction over 2002 levels by 2011 for US operations only. In October 2008, Sun achieved this target and set a new goal to reduce global Scope 1 and 2 emissions from operations by 20 percent over 2007 levels by 2015.

### Target Achievement

By the end of 2006, Sun had reduced GHG emissions from its US operations by 6.5 percent from 2002 levels. In October 2008, Sun met its EPA Climate Leaders goal of a 20 percent reduction in US GHG emissions reduction over 2002 levels by 2011 – four years early.

### Energy Efficiency

Sun has undertaken building retrofit and efficiency projects, as well as consolidation and optimization of IT infrastructure. The company says that 90 percent of its GHG emissions are due to energy use and that its energy efficiency measures are in line with its existing emissions reduction goal. The company has introduced 27 low-cost or no-cost measures to optimize the operation of its facilities, such as cleaning buildings during daylight hours to avoid additional electricity use at night. Sun has also identified 45 projects that will reduce overall energy costs by 4 percent annually. In total, Sun has reduced electricity consumption in its US buildings by 22 percent, gas consumption by 32 percent and carbon emissions by 21 percent. Sun also plans to work with local utility companies to introduce peak-load reduction plans at all US facilities in 2008.

In particular, Sun is focusing on “greening” its datacenters - making them smaller and more energy efficient so that they will emit less carbon and cost less. By using best practices in datacenter design and hardware consolidation, Sun was able to cut its utility bill by over 60 percent and earn over \$1 million in rebates at its San Francisco Bay Area facilities (an interactive tour of some facilities is available on the company’s website). Sun established a new, centralized organization, Global Lab & Datacenter Design Services, with the authority and budget to execute a new technical infrastructure strategy. The company has built new energy efficiency datacenters in the US, India and the United Kingdom, with more planned.

Sun is also working to certify its buildings to LEED standards and in December 2006 formed an internal LEED team. The team is developing a strategic plan that should be completed by the end of 2009 and hopes to begin the certification process for 10 to 20 buildings in fiscal 2009.

Additionally, Sun has an “Open Work” program, which allows employees to work remotely while easing pollution and reducing energy use. More than 14,000 employees work from home or in a flex office up to two days a week and approximately 2,800 employees do so from three to five days a week. Sun reduced real estate holdings by more than 15 percent in fiscal 2007. Sun also began a partnership with the University of Colorado to develop a full

accounting system for the energy saved through its “Open Work” program. Finally, Sun is working with Avis Car Rental to incorporate hybrid vehicles into its preferred renter program and to expand hybrids to its own car fleets.

- Renewable Energy* Sun is in the process of developing a comprehensive renewable energy strategy that may include on-site generation, purchasing renewable energy directly from electricity producers and running emergency generators on biofuels or combined heat and power systems. Specifically, Sun is investigating the use of solar arrays for its Broomfield, Colorado and Menlo Park, California campuses. In addition, since October 2005, the Linlithgow, Scotland manufacturing facility has used 100 percent renewable energy – wind and hydro power.
- Emissions Trading* Sun does not currently participate in any emissions trading scheme, and does not foresee doing so in the near term.
- Products & Services* Sun says its goal is to design all products with energy efficiency and eco responsibility in mind. The company’s Eco Innovation initiative, launched in August 2007, offers energy efficient servers, storage and other network products, as well as a suite of supporting services. Sun’s UltraSPARC T1 processor with CoolThreads technology uses less than half the power of standard processors, and revenue for Sun’s energy-efficient servers doubled to approximately \$550 million in fiscal 2007. Sun has also been actively involved in working with the US EPA on an ENERGY STAR specification for energy-efficient computers. The company also provides network infrastructure that can respond to physical changes and sudden events. The Sun Modular Data Center S20 is, essentially, a datacenter in a box. Since the “box” is a standard shipping container, these datacenters can be easily relocated in the event of an emergency.
- In addition, Sun offers services that help customers optimize their datacenter infrastructure and reduce energy use. Sun’s services include Eco Assessment, Optimization and Virtualization Kits, which help customers to develop and implement plans for optimizing energy usage, space utilization and cooling of IT infrastructure, including such services as Intelligent Power Monitoring. Of particular note is the company’s sharing of best practice knowledge; Sun’s website includes extensive white papers, podcasts and customer case studies to learn about datacenter efficiency.
- In April 2008, Sun launched the Sun Eco Advantage Program, providing partner companies tools and training to build their own eco IT practices. This innovative program offers partners exclusive access to Sun’s eco services and products, such as the new Sun SPARC Enterprise T5140 and T5240 servers and the virtualized Solaris Operating System. The program includes training on datacenter efficiency, technical assessment services, assistance in modeling investment returns and carbon savings scenarios as well as implementation methodologies.
- Research & Development* Sun invests \$2 billion each year in R&D related to the company’s Eco Responsibility goals. Sun is focused on delivering computing solutions designed from inception to be more energy efficient, take up less space and deliver better performance and economics. Sun has set the following product development related goals:
- By 2008, Sun intends to introduce several new products that offer 30 times more performance while using one-tenth the energy and generating half the heat compared to products offered in 2003.

- Sun will implement a thin-client IT architecture — where processing takes place on the network — in all Sun facilities, to significantly reduce both power and materials consumption.

## *Supply Chain Management*

While Sun has focused efforts to date on the later stages of the product lifecycle – packaging, product energy use and recycling – the company plans to look more closely in the future at product materials and transport. Sun also plans to work collaboratively within the IT industry to find solutions to measuring and managing the carbon footprint of its supply chain, but it recognizes that this is a major challenge.

Sun has adopted the Electronic Industry Citizenship Coalition (EICC) as its Supplier Code of Conduct. Phase 1 of the company's overall CSR supply chain strategy is focused on its 59 direct material suppliers with whom Sun has master contract agreements. Suppliers must complete annual self-assessments and participate in site audits as required following risk assessments conducted by Sun. Beginning in fiscal 2008, suppliers will be evaluated on their environmental responsibility programs through Sun's Supplier Scorecarding Process.

In 2007, Sun launched a program to evaluate the company's entire packaging strategy to address environmental impact. The company is reviewing labeling, cardboard weight and recycling, among other issues. Sun says in its 2007 CSR report that the main challenge is in aligning logistics and packaging strategies. The company's supply chain strategy is designed to deliver products to customers using the most direct route possible, meaning that orders with parts produced in multiple locations aren't shipped together, thereby increasing packaging materials and waste.

HP met its goal nearly three years ahead of schedule to reduce the energy consumption and greenhouse gas (GHG) emissions of its products and operations to 20 percent below 2005 levels by 2010, and went on to increase its overall target to a 25 percent reduction. In September 2008, the company announced that it had measured the emissions from its first-tier manufacturing supply chain and became the first major technology company to release such supply chain data. While an Executive Council oversees the company's global citizenship strategy, including climate change, it is unclear to what extent the Board of Directors is involved in climate policies and strategic direction.

**Summary Score: 62**

## Company Information

HP is a technology company that operates in more than 170 countries around the world. HP's business is divided into three main groups: Personal Systems Group (business and consumer PCs, mobile computing devices and workstations); Imaging and Printing Group (inkjet, LaserJet and commercial printing, printing supplies, digital photography and entertainment); and the Technology Solutions Group (business products including storage and servers, managed services and software). The company had approximately 172,000 employees as of 2007.

### Contact Information

**Chairman/CEO:** Mark Hurd

**Website:** [www.hp.com](http://www.hp.com)

**Address:** 3000 Hanover Street, Palo Alto, CA 94304-1185 United States

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 13**

### CEO Leadership

Chairman, CEO and President Mark Hurd highlights the company's energy efficiency efforts in his introductory letter for the 2007 Annual Report. In his FY07 Global Citizenship Report letter, Hurd states, "Climate change represents one of the most daunting challenges facing our planet. HP is at the forefront of providing products and solutions for an increasingly energy-efficient, low-carbon world."

On the occasion of HP joining the WWF Climate Savers Program in February 2008, Hurd stated, "HP has been an environmentally-sensitive company for decades; it's simply part of our culture and DNA. We take a leadership role in climate change initiatives like WWF Climate Savers, and we will continue to seek innovative ways to reduce our carbon footprint." Hurd also participated in the G8 Climate Change Roundtable, convened by the World Economic Forum in June 2005.

# HEWLETT-PACKARD COMPANY

*Company Strategy* HP states on its website: “HP believes governments, companies, organizations and individuals must come together to address the growing challenges presented by climate change. For our part, we have reduced our operation’s environmental footprint and increased the energy efficiency of our products and services. We are also developing solutions to reduce greenhouse gas emissions throughout the global economy and collaborating with NGOs and others to advance public policies that help turn debate into action.”

HP says it is responding to climate change with a comprehensive, four-pronged strategy:

- Reducing GHG emissions from internal operations
- Reducing GHG emissions associated with products and services throughout their life cycles
- Innovating to reduce GHG emissions in other parts of the economy
- Collaborating with others to combat climate change and influence public policy to devise and implement an effective response

*Executive Responsibility* Responsibility for climate change is included in the company’s global citizenship programs, overseen by an Executive Council. Leadership for the global citizenship strategy sits with the Office of Technology and Strategy, which works with business units to manage and measure performance. HP also maintains councils focused on key issues such as the environment and supply chain. Pierre Delforge is Manager, Energy and Climate Strategy.

*External Initiatives* In 2006, HP and World Wildlife Fund-US announced a joint initiative to reduce HP’s GHG emissions from operating facilities worldwide, educate others to adopt best practices and use HP technology in conservation efforts around the world. An initial project involves funding from HP to study the effects of climate change on the wildlife and habitats of North America’s Bering Sea. In February 2008, HP joined the WWF Climate Savers program as well.

HP is also a board member of the Climate Savers Computing Initiative and a founding board member of the Green Grid Association, two organizations focused on computing and data center energy efficiency. CSCI seeks to reduce computer power consumption by 50 percent by 2010, while Green Grid has established a goal with the US Department of Energy to make US data centers 10 percent more energy efficient by 2011. Other initiatives include:

- Combat Climate Change
- The International Climate Change Partnership
- Pew Center on Global Climate Change
- Global e-Sustainability Initiative

*Employee Training* HP encourages employees to use teleconferencing to reduce travel and also offers flexible working arrangements with environmental benefits. HP also offers programs that encourage bicycling and carpooling for employee commuting.

*Executive Compensation* Goals for achieving emissions and energy use reductions are included for relevant staff in their annual performance review process.

## Public Disclosure

Score: 8

*Annual Report* “HP is committed to reducing our own environmental impact as well as that of our customers, partners and suppliers. We launched our Design for Environment program in 1992, and we have been investing in energy-efficiency programs for more than a decade. Innovations such as our Dynamic Smart Cooling and Thermal Logic technologies offer advanced, energy-efficient solutions for customers. We expect these technologies to contribute to a 60 percent reduction in energy consumption in our new data centers. We also are expanding our use of renewable energy, including solar power for our San Diego facility and wind power for several of our facilities in Ireland.” ([http://media.corporate-ir.net/media\\_files/irol/71/71087/AR2007/pdfs/hp\\_annual\\_report\\_2007.pdf](http://media.corporate-ir.net/media_files/irol/71/71087/AR2007/pdfs/hp_annual_report_2007.pdf))

*Securities Filings* No climate change mention.

*Other Disclosure* HP has a detailed description of climate change efforts on both its website and in the company’s annual Global Citizenship Report. The company’s 2007 citizenship report focuses on three priority areas: climate and energy, supply chain responsibility and product reuse and recycling. On climate, the report covers operations, products, logistics, business opportunities, collaboration, case studies, goals and a perspective on strategy from John Davies, Vice President Green Technology Research.

**Sustainability Report:** FY07 Global Citizenship Report, April 2008

**URL:** <http://www.hp.com/hpinfo/globalcitizenship/gcreport>

**GRI Accordance:** G3 Application Level B

*Carbon Disclosure Project* Answered Questionnaire (Public)

*CDP6 Risk Disclosure* HP recognizes both regulatory and physical risks in its CDP6 response. From an operations perspective, the company views energy price increases as the main regulatory risk, along with product regulation costs. On physical risks, the company states, “Our business could be impacted by increased natural disasters attributed to climate change...And while HP’s operations are not generally located in low-lying areas subject to severe impacts from sea level rise, any disruption to key ports or modes of transportation could have a detrimental impact on our supply chain and product distribution.” Finally, HP also takes a macro view of risk exposure in referencing both the IPCC Fourth Assessment Report on the Stern Review on the Economics of Climate Change and noting that climate change will likely have measurable impact on overall economic growth.

*Public Policy* HP says in its CDP6 response that it “supports coordinated and cost-effective actions by governments to help businesses and individuals address climate change.” The company lays out the following principles that it believes should guide public policy:

- Policy frameworks that use market-based mechanisms to set clear, transparent and consistent price signals over the long term offer the best hope for unleashing innovation and competition.
- Developing countries have a legitimate aspiration to development, which global policies must take into account. HP supports approaches that create incentives and encourage actions by all countries, including large emitting economies in the developing world, to implement GHG emission reduction strategies.



# HEWLETT-PACKARD COMPANY

- IT solutions can help all countries, and particularly developing economies which are building their infrastructure from the ground up, achieve rapid economic development with a lower dependency on fossil fuels.
- Climate change mitigation must not be viewed in isolation from other highly important challenges, such as ensuring access to energy, expanding availability of clean water, alleviating poverty and achieving growth in the global economy.
- Undertaking a system wide, integrated approach to tackling climate change will identify the greatest opportunities to reduce impact throughout the product life cycle.

In addition, in December 2007, HP signed the Bali Communiqué, endorsed by 150 global business leaders calling for a comprehensive, legally binding United Nations framework to tackle climate change.

## Emissions Accounting

Score: 13

GHG Emissions Inventory

Year: FY2006

Facility/Region: Global

Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	102,552
Scope 2 (Indirect –Electricity)	1,415,555
Scope 3	—
Travel	464,000*
Logistics	2,000,000**
Products	—
Supply Chain	—

\* Estimate based on business commercial air travel, the HP air fleet and the HP auto fleet.

\*\* Estimate with approximately 75 percent from international air freight, 25 percent from road transport and parcel freight.

Accounting Methods

In 2007, HP collected utilities data from 101 of its largest sites, which account for 73% of floor space. The company then extrapolated data from comparable facilities, primarily leased small office space, for the remaining 27% of floor space.

External Verification

Independent auditor Bureau Veritas Certification verifies HP's GHG emissions measurements and annual reporting under the protocols of the World Economic Forum's Global Greenhouse Gas Registry.

Certified CO<sub>2</sub> Offsets

None identified.

## Strategic Planning

Score: 28

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Absolute)	16%	2005	2010	HP-owned and leased facilities worldwide
Energy Efficiency	25%	2005	2010	High-volume printer, server, desktop and notebook PC families
Renewable Energy	50 million kWh/year	2006	2007	United States



# HEWLETT-PACKARD COMPANY

## *Target Details*

Apart from the above targets that address energy consumption and associated GHG emissions, HP has also established the following targets related to logistics:

- Use rail for 21 percent of transport miles for imaging and printing products in North America in 2008
- Implement the use of plastic pallets (less than a quarter of the weight of wood pallets) for 100 percent of notebook shipments from Asia to the Americas by May 2008
- Implement idling restrictions and dwell-time reductions at more than 50 percent of HP's US and Canadian distribution centers by August 2008
- Participate in US Environmental Protection Agency SmartWay Transportation Program, including increasing use of SmartWay surface transportation carriers to 85 percent in the US by December 2008 and shipping 100 percent of North America consumer desktops and monitors using only SmartWay surface transportation carriers, beginning July 2008.

## *Target Achievement*

HP made progress in 2007 by improving the company's use of space, installing more efficient technology and equipment and increasing renewable energy purchases. The company also decreased natural gas use. Although HP's number of employees increased by 10 percent in 2007, the company's global GHG emissions from operations decreased 5 percent in absolute terms (82,160 tonnes CO<sub>2</sub>e) and 17 percent per unit of revenue. HP also met its goal nearly three years ahead of schedule to reduce the energy consumption and emissions of its products and operations to 20 percent below 2005 levels by 2010. Therefore, HP increased its overall target to 25 percent below 2005 levels in 2008.

Looking specifically at emissions savings from improvements in logistics, HP saved approximately 7,000 tonnes CO<sub>2</sub>e associated with notebook and camera shipments from Asia to Europe in 2007 due to the use of lighter plastic pallets. HP also saved approximately 4,000 tonnes CO<sub>2</sub>e in 2007 by shifting notebook PC transport from air to ocean freight. The switch from road to rail transport between distribution centers and resellers in the US also reduced emissions by about 3,500 tonnes in 2007.

## *Energy Efficiency*

HP is consolidating its 85 legacy data centers into 6 data centers in three cities, each equipped with the latest energy-efficient equipment and Dynamic Smart Cooling technology. These efforts are expected to yield annual cost savings of up to \$30 million. In addition, the company is optimizing office space use and decommissioned 179 sites worldwide in 2007, yielding a net reduction of 5.7 percent of the company's total space. HP is also upgrading to more energy efficient monitors and notebooks at its offices, which is expected to reduce energy use by more than 4 million kilowatt hours per year, saving approximately 2,000 tonnes of CO<sub>2</sub>e and about \$320,000.

HP is also focused on reducing employee travel through teleconferencing solutions and improving the efficiency of the company's vehicle fleet. HP has 34 Halo Telepresence studios in 14 countries and plans to nearly quadruple that number by the end of 2009, which is expected to save at least 32,000 tonnes of CO<sub>2</sub>e per year. The company's Green Fleet initiative requires that beginning in 2008 all new corporate cars purchased in several countries in Europe, the Middle East and Africa (EMEA) must meet stricter CO<sub>2</sub> emission limits that will decrease each year.

# HEWLETT-PACKARD COMPANY

*Renewable Energy* HP had a goal in 2007 to increase renewable energy purchases in the US to 50 million kWh/year from the 2006 level of 11 million kWh/year. The company surpassed this target by purchasing 61.4 million kWh of renewable energy and renewable energy credits. HP also says it is increasing its renewable energy purchases in 2008, and estimates that these will make up approximately 4 percent of total energy purchases this year. The company has added a solar power installation for its San Diego facility and is tapping wind power for several facilities in Ireland.

*Emissions Trading* HP does not engage in emissions trading at this time.

*Products & Services* HP has worked on product energy efficiency since 1992, when the company launched its Design for Environment program. Today, HP is developing new IT solutions that can help reduce GHG emissions, and has categorized these solutions into three broad areas: Reduce, Substitute and Enable. "Reduce" focuses on improving the efficiency of existing products and services. HP recently introduced Dynamic Smart Cooling, an approach to reduce the power needed to cool data centers. The "Substitute" area is centered on replacing carbon-intensive activities with low-carbon alternatives. For example, HP Halo Telepresence Solutions reduces the need for business travel. Finally, HP also sees opportunities in the "Enable" area, which focuses on technologies to support carbon markets and the monitoring of carbon emissions. This will involve software and services to help clients manage and report energy use and emissions. HP has also introduced various products to help clients automate workflows and reduce paper use.

HP is an original partner of the ENERGY STAR program, a voluntary program to design and promote products that save energy while maintaining product performance. HP has numerous ENERGY STAR qualified products and was the first PC manufacturer to register an Electronic Product Environmental Assessment Tool (EPEAT™) Gold product with the HP Compaq rp5700 Long Lifecycle Business Desktop PC in 2007. Other product examples include HP LaserJet printers and new HP inkjet printers, which automatically reduce power consumption after a designated period of inactivity. All HP business notebook PCs are also delivered with power management enabled and meet ENERGY STAR standards. HP power management features on new HP 5000 and HP 7000 series Desktop PCs can save up to 481 kWh or about 240 kg of CO<sub>2</sub>e per year.

Meanwhile, HP's server products are also integrating energy efficiency features. HP ProLiant and Integrity Blade Servers and c-Class BladeSystem enclosures with embedded thermal logic (launched in 2006) reduce energy consumption by 33 percent compared with conventional rack-mounted servers. HP's new and enhanced disk storage systems and tape drives help customers reduce storage power and cooling costs by as much as 50 percent. HP also offers data center site-planning services to help customers develop more efficient power and cooling strategies.

Finally, HP has also developed technologies relating to solar energy and fuel cells that are available for licensing by other companies. In June 2008, HP announced that Xtreme Energetics, a solar energy system developer, will license HP's transparent transistor technology designed to generate electricity at twice the efficiency and half the cost of traditional solar panels.

## *Research & Development*

In March 2008, HP Labs announced a refocused research agenda, with sustainability being one of five focus areas. HP Labs will focus its sustainability research on three major projects – an industry-first initiative to reduce the carbon footprint of data centers by 75 percent, research to replace copper wiring in servers with laser light beams and tools for measuring and managing the amount of energy used to develop products.

HP Labs is collaborating with the University of California at Berkeley to develop the Lifetime Exergy Advisor. Product designers will employ this tool to assess a product's total environmental impact and to determine the environmental benefits gained from using alternative materials and production processes. HP also plans to create an open online "sustainability hub" to share data on sustainable product design in 2009.

In June 2008, HP published a white paper entitled "Low Carbon IT Solutions" that identifies the potential to reduce GHG emissions using existing HP solutions.

## *Supply Chain Management*

HP joined the Carbon Disclosure Project Supply Chain Leadership Collaboration project in late 2007 to help develop a methodology for disclosing energy use and GHG emissions throughout the supply chain. In September 2008, the company announced that it had measured the emissions from its first-tier manufacturing supply chain – totaling 3.5 million tons of CO<sub>2</sub>e in 2007 – and became the first major technology company to release such supply chain data. The data represents more than 80 percent of the company's costs for the materials, manufacturing and assembly of its products worldwide.

HP has also developed a risk-based approach to prioritize its social and environmental responsibility (SER) program with first-tier suppliers, those with whom HP has a direct contractual relationship. The company uses various risk factors to categorize its first-tier suppliers into low and high-risk and to determine which factory sites to audit.

In terms of logistics, HP became a partner of the US EPA SmartWay Transport program in 2007. HP was also the first company to have the SmartWay logo placed on its product packaging by ensuring that 100 percent of the carriers for its Pavilion and Compaq Presario products are SmartWay partners. HP also has a Design for Logistics program that develops more energy efficient methods to transport the company's products. In 2007, the company completed a project to increase the utilization of pallets air-shipped from China that will eliminate 29,000 tonnes of CO<sub>2</sub>e annually, while reducing costs. Additional logistics projects and targets are described above under Target Details and Target Achievement.

At the end of 2006, Cisco established an executive-level EcoBoard responsible for the company's environmental vision and strategy, including climate change. The company has partnered with the US EPA Climate Leaders program and the Clinton Global Initiative to set greenhouse gas (GHG) emissions reduction targets, and is leveraging its expertise in networking and collaboration technologies to reduce its own GHG emissions and to pursue new commercial opportunities related to climate change. In addition, Cisco has been actively involved in supporting NGOs, public policies and regulations to address energy efficiency and the role of technology in addressing climate change.

**Summary Score: 55**

*Note: This profile does not include FY2008 information published in November in the company's 2008 Corporate Social Responsibility Report.*

## Company Information

Cisco provides routers and switches used to direct data, voice, and video traffic. Other products include collaboration technologies, storage networking, remote access servers, IP telephony equipment, optical networking components, video systems, set-top boxes and network service and security systems. The company sells products and services primarily to large enterprises and telecommunications service providers, but also markets products designed for commercial customers and consumers through its Linksys division. As of 2008, Cisco had approximately 66,000 employees.

### Contact Information

**Chairman/CEO:** John T. Chambers

**Website:** [www.cisco.com](http://www.cisco.com)

**Address:** 170 W. Tasman Dr., San Jose, CA 95134-1706, United States

## Board Oversight

**Score: 0**

### Board Committee/Member

None identified.

### Board Role

Cisco says in its 2007 Corporate Citizenship Report that the company believes that "our Board of Directors is able to effectively oversee the impact Cisco's policies and activities have on our responsible business management and overall CSR performance through the SBP [Sustainable Business Practices] team, as well as through various CSR issue-related councils, project teams and embedded businesses processes."

### Board Training

None identified.

## Management Execution

**Score: 14**

### CEO Leadership

Chairman and CEO John Chambers writes in his introductory letter to the 2008 Annual Report, "One thing that is clear to us as members of the 'human network' is the importance of environmental sustainability. Cisco's EcoBoard is made up of key senior leaders. This group is chartered with developing Cisco's green vision and strategy and with overseeing our environmental policies and practices."

Chambers has also spoken publicly about the importance of addressing climate change and industry-government partnerships. In February 2008, Cisco hosted the Connected Urban Development Global Conference in San Francisco, California, where Chambers encouraged cities to work with industry on climate change solutions. In March 2008, Chambers joined former Vice President Al Gore for a virtual conversation on climate change and technology innovation.

## *Company Strategy*

Cisco says in its 2007 Corporate Citizenship Report: "Our planet and the people who inhabit it face many environmental challenges—with climate change perhaps the most serious and pressing. Cisco is helping to alleviate these problems by making our operations and products more earth-friendly. In addition, we believe that communications technology can play a central role in reducing the greenhouse gas emissions that contribute in large part to global warming. We are developing technologies that are designed to help curb—and which ultimately may help reverse—the current climate trend."

Cisco is driving environmental initiatives in three key areas:

- **Architecture:** Cisco is developing networking architectures and solutions to enable customers and employees to mitigate their environmental impact.
- **Responsible operations:** Cisco is working to lessen its environmental footprint by using power in a more sustainable manner and by reducing the GHG emissions that result from business operations.
- **Product stewardship:** Cisco has committed to optimizing the functionality, accessibility and performance of its products while reducing the amount of power they need to operate.

## *Executive Responsibility*

Cisco's EcoBoard, formed at the end of 2006, is a cross-functional, executive-level body responsible for Cisco's environmental vision and strategy, including climate change. The board is chaired by Laura Ipsen, SVP, Global Policy and Government Affairs; John McCool, SVP, GM of Campus Switching Systems Technology Group and Ron Ricci, VP, Corporate Positioning. Reporting to the company's operating committee, the board also includes representatives from 14 business functions. The EcoBoard strategic plan incorporates a set of environmental objectives to address Cisco operations and products, tackle customer green requirements and provide opportunities for employee education and involvement.

The objectives are managed tactically by the Green Task Force (GTF). The GTF teams report progress towards goals on a quarterly basis to the EcoBoard and consist of Directors and senior managers who provide cross-functional management, monitoring and coordination of environmental programs. The Director of Cisco Sustainable Business Practices team sits on the GTF.

## *External Initiatives*

Cisco participates in the following industry initiatives:

- Global e-Sustainability Initiative (board member and Climate Change Working Group chair)
- Electronic Industry Citizenship Coalition board member and EICC Environmental Sustainability Working Group member

## *Employee Training*

Cisco has programs in place to facilitate teleworking/telecommuting, encourage and subsidize alternative transportation, provide employees an opportunity to learn about their personal

# CISCO SYSTEMS, INC.

carbon footprint and encourage employees to share personal “green” best practices via Cisco-supported online discussion forums.

## *Executive Compensation*

Cisco says in its latest response to the Carbon Disclosure Project that each major business function, such as manufacturing, engineering and workplace resources/facilities, includes business leaders with performance goals holistically addressing environmental sustainability, including climate change.

## Public Disclosure

Score: 8

### *Annual Report*

Cisco's 2007 Annual Report includes the following mention of climate change: “Technology gives us the power we all need to accomplish the difficult environmental tasks that lie ahead. For example, how can companies lower carbon emissions produced by their employees without losing their personal touch? One way is to decrease business travel and commuting by using TelePresence and Web collaboration.”

### *Securities Filings*

No climate change mention.

### *Other Disclosure*

Cisco's 2007 Corporate Citizenship Report includes a “Cisco and the Environment” section which highlights several initiatives: Architecting Sustainable Cities, Responsible Operations, Product Stewardship and Cisco's Supply Chain. The company's FY08 citizenship information will be published in November 2008. The company's 2008 report was not reviewed for this profile.

**Sustainability Report:** 2008 Cisco Corporate Social Responsibility Report, November 2008

**URL:** <http://www.cisco.com/web/about/ac227/ac333/index.html>

**GRI Accordance:** G3 Draft

### *Carbon Disclosure Project*

Answered Questionnaire (Public)

### *CDP6 Risk Disclosure*

Cisco sees climate-related policy and regulatory developments potentially affecting its operations, supply chain and products. While the company is not as concerned with increased operational costs, it does recognize that emerging product energy efficiency regulations may increase compliance costs or affect time to market. The physical risks to Cisco from climate change are believed by the company to be relatively small, but Cisco monitors the latest scientific reports from the IPCC and UNDP. Of particular note is Cisco's mention that secondary impacts, such as the health of workforces and water restrictions, bear monitoring. Cisco says there is less margin for absorbing adverse impacts of climate change in emerging economies compared to developed countries.

### *Public Policy*

Cisco outlines its public policy position on climate change in its latest response to the Carbon Disclosure Project. The company says its supports broad-based cap-and-trade programs and regulation that promotes market competition and consumer choice. The company also supports “policies that promote the adoption of information and communications technologies as a means of driving energy efficiency in more carbon-intensive sectors of the economy.”



# CISCO SYSTEMS, INC.

In addition, Cisco is engaged with policymakers in key countries and regions where climate change legislation and regulation are under discussion, including the US, EU, China, India and Latin America.

- Cisco contributed to a May 2008 European Commission Communication on Addressing the Challenge of Energy Efficiency through Information and Communications Technology.
- Cisco signed a letter to then-UK Prime Minister Tony Blair, urging the UK government to provide climate policy leadership within the EU and G8.
- As a part of the World Economic Forum Information Technologies and Telecoms Industry Partnership, Cisco provided leadership in the working group effort to produce a report entitled, "The Contribution of ICT to Climate Change Mitigation," published and shared with governments in January 2008.
- Through its membership in the Information Technology Industry Council, the Green Grid and the GridWise Alliance, Cisco actively supported the data center energy efficiency and smart grid provisions, which passed in the Energy Independence and Security Act of 2007.

## Emissions Accounting

Score: 13

GHG Emissions Inventory

Year: FY2007

Facility/Region: Global

Protocol: GHG Protocol

CO<sub>2</sub>e  
(Metric Tonnes)

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	65,971*
Scope 2 (Indirect –Electricity)	479,202
Scope 3	—
Travel	205,704**
Logistics	—
Products	—
Supply Chain	—

\* Total Scope 1 and 2 emissions calculated from collected data have been adjusted upward to account for incomplete coverage of Cisco's real estate portfolio. The reported Scope 1 and 2 emissions, therefore, characterize 100% of Cisco's facilities.

\*\* Reported emissions from business air travel are estimated to cover at least 99% of Cisco's business air travel. Scientific Atlanta (SA), a division of Cisco acquired in Feb 2006, is currently omitted from the results. SA air travel is about 5% of Cisco's total air travel. SA travel will be added in the next reporting period.

Accounting Methods

Cisco's energy and GHG inventory uses the WRI/WBCSD GHG Protocol and the US EPA Climate Leaders GHG Protocol.

External Verification

All emissions calculations and data were audited in May 2008 as part of the EPA Climate Leaders Partnership. In early FY2008, Cisco also contracted with an outside consulting firm to check and improve Cisco's GHG emissions reporting (Scope 1 and 2). Scope 3 travel emissions are separately audited by an air travel data aggregator.

Certified CO<sub>2</sub> Offsets

None identified.

## Strategic Planning

Score: 20

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Absolute)	25%	2007	2012	Global



<i>Target Details</i>	<p>In April 2007, Cisco joined US EPA Climate Leaders and in June 2008 announced its emissions reduction goal associated with this program. This global target applies to Scope 1 and 2 emissions as well as Scope 3 emissions from air travel only. Separately, as part of the Clinton Global Initiative, Cisco has committed to reducing Scope 3 carbon emissions from air travel 10 percent by 2010 using a 2006 baseline.</p>
<i>Target Achievement</i>	<p>For FY 2007 US and UK operations, Cisco purchased electricity, at a slight cost premium, from renewable sources that saved the equivalent of approximately 76,215 metric tonnes CO<sub>2</sub>e. Therefore, absolute GHG emissions fell by 11 percent. Cisco's business air travel emissions increased only about five percent year over the year in spite of a 23 percent increase in revenue and a 17 percent increase in headcount. Normalized by revenue, Cisco's air travel emissions fell by 14 percent during FY 2007. Also normalized by revenue, the company's energy consumption and GHG emissions fell by 10 and 24 percent, respectively, during FY 2007.</p>
<i>Energy Efficiency</i>	<p>Cisco now considers GHG emission reductions when prioritizing capital projects, including energy efficiency and conservation programs. The Cisco Connected Real Estate program integrates the management of building electrical, HVAC and other building systems with Cisco's network infrastructure. To reduce power consumption in the company's laboratories, which typically consume 80-90 percent of a building's electricity Cisco developed and is piloting two software programs designed to achieve greater energy efficiency. The first, Automated Management Power System (AMPS), powers down equipment when it is not in use. The second, tMon, is a web-based system that monitors and reports on equipment power status, sending prompts when equipment has been left on.</p> <p>To reduce business air travel, Cisco has invested more than \$20 million in TelePresence units to promote remote collaboration. As of July 2007, Cisco had installed approximately 110 TelePresence units in offices in more than 20 countries. The company is conducting a pilot program with travel partner American Express to create an automated GHG emissions calculation tool. As a result, Cisco employees will be able to make "green" travel decisions and have access to individual GHG emissions reports. This pilot was scheduled to begin in fall 2008.</p> <p>Cisco Connected Workplace is a program launched at the company's San Jose, California headquarters and is currently being implemented worldwide. The program provides a flexible working environment allowing more efficient use of IT and other facilities infrastructure. Every day, 25 percent of the Cisco workforce takes advantage of mobile technology, innovative workspaces and flexible schedules.</p>
<i>Renewable Energy</i>	<p>Cisco is entering its second year of a Green Power Purchase Agreement to procure 100-percent renewable power for its UK facilities, representing approximately 26 million kWh per year. In fiscal year 2007, Cisco significantly increased renewable energy, including an additional 79.9 million kWh for its headquarters site. Total green power purchases for worldwide facilities were 112 million kWh. As of July 2008, Cisco was ranked the seventh-largest purchaser of green power in the US EPA Fortune 500 Challenge. Cisco also participated in EPA's Green Power Challenge in 2007.</p>

*Emissions Trading* Cisco is monitoring the voluntary and non-voluntary carbon trading exchanges, registries and associated legislation, but at this time has no plans to participate in the carbon markets.

*Products & Services* Cisco believes information and communications technology can play a large role in addressing climate change. Cisco has identified opportunities in data management, early warning systems for extreme weather, water management systems and collaboration technologies that provide an alternative to physical travel. The company has also hired a Vice President of Green Engineering, Paul Marcoux, a founding member of the Green Grid initiative.

Cisco products and services that offer climate change solutions include TelePresence, a video conferencing suite; Connected Real Estate Solutions, which reduces building energy consumption; data center virtualization; and WebEx, an on-line conferencing service.

Cisco is also building tools to measure the reduction in GHG emissions from the use of its collaboration technologies.

In June 2008, Cisco launched a new offering – the Efficiency Assurance Program (EAP). This centralized web-based tool will help customers better analyze power use and establish efficiency benchmarks across datacenter infrastructure and facilities. The service will allow users to determine a power cost, utilization rate and CO<sub>2</sub> emissions related to their IT operations. Additionally, Cisco's Data Center Efficiency Services help customers identify the appropriate power and cooling infrastructure to support a reliable network, while identifying steps to make the infrastructure more efficient and sustainable.

In terms of improving the energy efficiency of existing products, Cisco is improving the configuration of key components to keep power requirements at a minimum, while also assisting customers in maximizing utilization of their equipment. Cisco is actively involved in product-related energy efficiency efforts with the ENERGY STAR program, the Japanese Ministry of Economy, Trade and Industry Top Runner program, the EU Codes of Conduct and the EU Energy-Using Products Directive. Cisco participated in the development of a new ENERGY STAR specification for set-top boxes, which took effect in September 2008, and is providing information to support the development of energy efficiency metrics for data centers. In 2006, Cisco also established an internal, cross-functional working group to support energy efficient product design and industry standards.

*Research & Development* In support of the Clinton Global Initiative, Cisco has launched Connected Urban Development, an initiative that embeds advanced information communication technology in urban infrastructure and management systems. This initiative has the potential to reduce global warming by creating smarter, more environmentally-friendly cities. The total value of Cisco's investment in this initiative is estimated at \$15 million over five years. Cisco has also chosen Massachusetts Institute of Technology's Mobile Experience Lab as a global research and academic partner for the initiative.

*Supply Chain Management* Cisco is a board member of the Electronic Industry Citizenship Coalition (EICC), an EICC Environmental Sustainability Working Group member, and plans to respond to CDP's inaugural Supply Chain Leadership Collaboration survey. Currently, the focus of attention is supply chain emissions for direct procurement. Cisco is also at the initial stages of collaborating with supply chain partners to address what Cisco has identified as the 5 Big "Impactors" of the Green Supply Chain, namely: (i) carbon emissions, (ii) energy use/availability, (iii) water use/quality, (iv) land use/waste and (v) hazardous materials.

Canon has been a leader in promoting resource efficiency and environmental protection in Japanese industry. The company takes a progressive approach in measuring lifecycle carbon dioxide emissions for its products from raw materials and delivery to stores to customer end-use. The company also has extensive disclosure on climate change mitigation efforts and related business risks in its annual reporting to shareholders and through its website.

**Summary Score: 52**

## Company Information

Canon Inc. is a manufacturer of printers and other computer peripherals for home and office use. The company's products are divided into three product groups: business machines, cameras and optical and other products. Canon has approximately 23,429 employees.

### Contact Information

**Chairman/CEO:** Fujio Mitarai

**Website:** [www.canon.com](http://www.canon.com)

**Address:** 30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo 146-8501, Japan

## Board Oversight

**Score: 0**

*Board Committee/Member* None identified.

*Board Role* None identified.

*Board Training* None identified.

## Management Execution

**Score: 11**

### CEO Leadership

Canon Chairman Fujio Mitarai is also the Chairman of the Japan Business Federation (Nippon Keidanren), which favors a sector-based approach to controlling greenhouse (GHG) emissions and has not supported mandatory industry targets for Japan to reach its emissions reduction targets under the Kyoto Protocol. Mitarai has spoken extensively in public forums on the importance of addressing climate change. He was quoted by the Nikkei newspaper in February 2008 as saying, "It is important to discuss the matter, taking into account global trends, particularly in Europe and the United States." When G8 leaders met in Tokyo in April 2008, Mitarai wrote an editorial in *Time* saying, "I hope to see Japan lead the way toward the creation of a global low-carbon society through the participation by all major emitters, improved energy efficiency and the development of innovative technologies."

### Company Strategy

Canon launched its Group Environmental Charter in 1993 focused on maximizing resource efficiency throughout the entire product lifecycle and offering advanced technology solutions to environmental challenges. While the charter, which was updated in 2007, addresses general environmental assurance activities and the establishment of an Environmental Management System, it does not specifically address climate change.

In 2003, the company launched a new goal, "Factor 2", in its Vision for 2010 policy to double environmental efficiency compared to the 2000 level. Canon defines environmental efficiency as the ratio of consolidated net sales to lifecycle CO<sub>2</sub> emissions of all company products. Canon says it approaches this challenge through the three perspectives of produce, use and recycle, and by setting targets specific to different product operations and sites.

<i>Executive Responsibility</i>	Tomonori Iwashita, Managing Director and Group Executive, Environment is responsible for overall environmental and climate change affairs and regularly reports to the President. In 2007, Canon set up a Global Environment Strategic Expert Committee within the Management Strategy Committee to formulate strategic planning around specific themes.
<i>External Initiatives</i>	Canon is a sponsor of the WWF-Canon Polar Bear Tracker project. This initiative involves tracking polar bears in the Arctic by satellite to study the effects of climate change.
<i>Employee Training</i>	Canon offers employees general environmental education through e-learning programs, as well as environmental management training for managers.
<i>Executive Compensation</i>	Since 2001, Canon has included in its Consolidated Performance Evaluation system a general environmental component for operational activities. The company's Environment Headquarters evaluates and scores the degree to which environmental objectives are achieved by staff, and this accounts for approximately 10 percent of the total evaluation.

## Public Disclosure

Score: 12

<i>Annual Report</i>	Canon's 2007 Annual Report highlights environmentally friendly products and efforts to reduce emissions through increased utilization of ship and rail transport.
<i>Securities Filings</i>	<p>Canon includes in the Environmental Regulations section of its 2007 Form 20-F a discussion of the Kyoto Protocol and Japan's commitment for emission reductions. The company states that in response to demand from the Japanese government, four of the electrical and electronic industry associations to which Canon belongs have increased their voluntary reduction targets over the last couple of years resulting in a new target to reduce emissions per production unit by 35 percent compared to 1990. Canon says it will "need to strengthen its group structure" in order to meet a voluntary target in line with that of the industry associations. Finally, the company is also monitoring and planning for unexpected regulatory developments related to climate change.</p> <p>In the Risk Factors section of the company's 2007 Form 20-F, Canon also states, "Canon is endeavoring to reduce carbon dioxide emissions by increasing its use of railroad transportation and ocean transportation to ship its products. Failure by Canon to meet its targets may adversely affect Canon's brand and image and its business."</p>
<i>Other Disclosure</i>	<p>Canon provides a comprehensive overview of environmental management systems and progress to date on various environmental goals in its 2008 sustainability report. Discussion of climate change is divided between energy conservation at operational sites, CO<sub>2</sub> emissions reduction across logistics and the development of environmentally conscious products. Detailed information available on the Canon website are highlighted within each section. Canon also provides detailed charts of its lifecycle CO<sub>2</sub> emissions accounting and third party opinions on the overall report.</p> <p><b>Sustainability Report:</b> <i>Canon Sustainability Report 2008</i>, July 2008  <b>URL:</b> <a href="http://www.canon.com/environment/report/pdf/report2008e.pdf">http://www.canon.com/environment/report/pdf/report2008e.pdf</a>  <b>GRI Accordance:</b> None identified.</p>
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)

**CDP6 Risk Disclosure** Canon discusses both regulatory and physical risks in its CDP6 response. The company states that new laws concerning climate change and energy use to come into effect in Japan from April 2009 will require stronger emissions management systems. Canon sees its investments in green building technologies as helping to protect the company from future climate-related physical risks such as climate pattern changes and temperature increases. In response, Canon has developed an Environmentally Conscious Management System to manage its overall environmental activities.

**Public Policy** While Canon has not taken a formal public policy stance on climate change regulation, Chairman and CEO Fujio Mitarai is also Chairman of the Japanese Business Federation (Nippon Keidanren) which has been very active in public dialogue on the issue. In April 2008, Mitarai hosted the G8 Tokyo Business Summit and emphasized the importance of improving energy efficiency through sector-based cooperation and investing in low-carbon technology development.

## Emissions Accounting

**Score: 15**

*GHG Emissions Inventory* **Year:** 2007 **Facility/Region:** Global **Protocol:** GHG Protocol

<b>Emissions</b>	<b>CO<sub>2</sub>e (Metric Tonnes)</b>
<b>Scope 1 (Direct)</b>	—
<b>Scope 2 (Indirect –Electricity)</b>	<b>161,322</b>
<b>Scope 3</b>	<b>826,338</b>
Travel	
Logistics	<b>852,000</b>
Products	<b>1,565,000</b>
Supply Chain	<b>3,094,000</b>

**Accounting Methods** Canon's calculations are based on the Japanese Ministry of the Environment's Guidelines for the Methods for Estimating the Amount of Greenhouse Gas Emissions by Businesses. This ensures consistency with the GHG Protocol.

**External Verification** Canon's environmental reporting was audited by the Japan Environmental Management Association for Industry in 2002 when the company obtained Ecoleaf System certification. Since then, Canon has undergone renewal inspections every three years.

**Certified CO<sub>2</sub> Offsets** None identified.

## Strategic Planning

Score: 14

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
<b>GHG Emissions</b>	<b>See Details</b>	<b>2000</b>	<b>2010</b>	<b>Global</b>
<b>GHG Emissions (Intensity)</b>	<b>10% per unit of net sales</b>	<b>2000</b>	<b>2008</b>	<b>Global operational sites</b>
<b>GHG Emissions (Intensity)</b>	<b>20% per unit of net sales</b>	<b>2000</b>	<b>2008</b>	<b>Global transportation</b>

#### Target Details

Canon's target is to double by 2010 its environmental efficiency from the baseline year of 2000. Environmental efficiency is represented by the ratio of consolidated net sales to lifecycle CO<sub>2</sub> emissions, which are the total CO<sub>2</sub> emissions over the entire lifecycle of a product. For operational site emissions, Canon has set a goal for 2008 to reduce CO<sub>2</sub> emissions per unit of net sales by 10 percent or more from the 2000 level.

In 2002, Canon established the Environmental Logistics Working Group with the goal of reducing CO<sub>2</sub> emissions in logistics processes. The company has set a goal to reduce CO<sub>2</sub> emissions in transportation per unit of net sales by 20 percent in 2008 from 2000 levels. Canon has various other targets for resource conservation, including a goal in 2008 to reduce water use per unit of net sales by 25 percent from 2000 levels.

#### Target Achievement

Canon provides detailed reporting in its 2008 Sustainability Report on lifecycle CO<sub>2</sub> emissions for the years 2004 through 2007, as well as target achievement to date. Lifecycle emissions are broken down into four categories: 1) the manufacture of raw materials and parts by suppliers, 2) Canon's operational site activities (development, production, and sales), 3) transportation to sales outlets and other locations and 4) customer usage.

Canon has achieved a 1.57 times improvement, from the 2000 baseline, in the company's environmental efficiency as of 2007. However, absolute emission levels for operations did rise by 1.4 percent between 2006 and 2007 due to business growth. Canon reduced operational site emissions – per unit of net sales – by 12 percent from the 2000 level. Canon also reduced transportation emissions per unit of net sales by 25 percent over 2000 levels in 2007. In terms of water use, Canon achieved a 25 percent reduction per unit of sales from the 2000 level in 2007 to reach 9.02 million cubic meters of water.

#### Energy Efficiency

In 1996, Canon established the Operational Site Energy Efficient Special Committee under the Global Environment Promotion Committee, which was charged with promoting energy conservation activities across the company. Since then, Canon has made improvements to production facilities and air conditioning equipment to reduce energy consumption. In 2007, Canon focused on efforts to introduce energy-saving equipment at operational sites.

#### Renewable Energy

None identified.

#### Emissions Trading

Canon does not engage in emissions trading at this time.



## *Products & Services*

Canon has prioritized energy and resource efficiency in its product development and design. The company notes in its CDP6 response that in 2007 reduced energy consumption by its products lowered energy bills by 59.5 billion yen (\$502 million). CO<sub>2</sub> emissions from product use were also reduced by 31 percent in 2007 compared to 2000.

Canon uses energy efficient technologies, such as induction heating, to shorten warm-up times in copying machines and printers. For example, Canon has reduced the power consumption of one digital commercial printer model by 75 percent. With on-demand operation technology, Canon has reduced the power consumption of its MP610 inkjet printer by 86 percent compared to earlier models.

In 2008, Canon USA received the US EPA ENERGY STAR Award for Excellence in Product Labeling. Also this year, Canon USA announced the Generation Green initiative that combines the company's eco-friendly printer products under one brand and provides information to consumers on product energy use and other environmental factors.

## *Research & Development*

Canon has invested 130 million yen in research and development for energy efficiency technologies and products. Canon focuses on making smaller and lighter products, as well as recycle-conscious design.

## *Supply Chain Management*

In terms of logistics, Canon is working to shorten transportation routes by reviewing locations of logistics sites and promoting direct delivery to customers. The company has also been shifting to rail and ship transport in Japan since 2002. Canon reports that in 2007 the company was able to reduce CO<sub>2</sub> emissions by 3,840 tons by shifting to rail transport in Japan. Similar initiatives are underway in Europe and China. In 2007 Canon introduced low-emission commercial vehicles to its fleet in Japan.



Apple says on its corporate website that over 95 percent of the company's carbon footprint comes from its products. In order to address this, Apple focuses on environmental impact from product design through manufacturing to customer use and recycling. In October 2008, the company released for the first time estimated carbon footprints for each of its main product lines. However, Apple has not yet conducted a comprehensive greenhouse gas (GHG) emissions inventory or set emission reduction targets for its own operations.

**Summary Score: 28**

## Company Information

Apple Inc. designs, manufactures, and markets personal computers, portable digital music players, mobile communication devices, and sells a variety of related software, services, peripherals and networking solutions. The Company sells its products worldwide through its online stores, retail stores, direct sales force and third-party wholesalers and resellers. The company had approximately 21,600 employees as of 2007.

### Contact Information

**Chairman/CEO:** Steven Jobs, CEO and Director

**Website:** www.apple.com

**Address:** 1 Infinite Loop, Cupertino, CA 95014, United States

## Board Oversight

**Score: 0**

### Board Committee/Member

None identified.

### Board Role

Apple received a shareholder proposal this year asking the Board of Directors to establish a board committee on sustainability that would address environmental issues, including climate change. The Board recommended a vote against this proposal in its 2008 Proxy Statement, and at the annual meeting in March the proposal received 7.8 percent of the vote. The company stated in its proxy statement that it supports efforts to improve environmental sustainability, but believes a dedicated board committee is not "an effective way for the Company's practices and goals to continually evolve and improve in response to changing conditions." Former Vice President Al Gore, who is also founder of the Alliance for Climate Protection, sits on the Board.

### Board Training

None identified.

## Management Execution

**Score: 5**

### CEO Leadership

CEO Steve Jobs issued a statement in May 2007 called "A Greener Apple" providing an update on the company's environmental policies with a focus on toxic chemicals and product recycling. In October 2008, Jobs issued a "2008 Environmental Update", available on the company's website. Jobs introduces the company's new initiative to report lifecycle GHG emissions, energy efficiency metrics, material composition and packaging details for each of its products and states, "We're approaching this issue at a product level because we think it's the best way to help our customers make informed decisions about their own carbon footprint and how to reduce it."

# APPLE INC.

<i>Company Strategy</i>	Apple outlines its environmental strategy on its website as having four focus areas: product and packaging design, materials, energy efficiency and recycling. The company also states, "Apple strongly believes that reducing the environmental impact of our business starts with the design of our products." Apart from products, for which Apple has assessed the full lifecycle GHG emissions since 2006, the company is working to manage electricity and natural gas consumption at its facilities to reduce carbon emissions.
<i>Executive Responsibility</i>	None identified.
<i>External Initiatives</i>	Apple is a signatory of the European Union Code of Conduct on Power Supplies, created to encourage manufacturers to design power supplies that minimize energy consumption in off mode. The company is also a founding member of the US Federal Energy Management Program (FEMP), which introduced energy efficiency requirements for the off mode of computer products.
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	None identified.

---

## Public Disclosure

Score: 3

<i>Annual Report</i>	Apple does not publish a separate annual report, and relevant information can be found in the company's Form 10-K filings.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	Apple has an Environment section on its website that covers policies and recent initiatives across product design, materials, energy efficiency and recycling. In October 2008, the company released a series of Environmental Performance reports for its products and facilities. These include GHG emissions and energy use data. <b>Sustainability Report:</b> <i>Facilities Report 2008 Environmental Update</i> , October 2008 <b>URL:</b> <a href="http://images.apple.com/environment/resources/pdf/FacilitiesReport2008.pdf">http://images.apple.com/environment/resources/pdf/FacilitiesReport2008.pdf</a> <b>GRI Accordance:</b> References G3 guidelines
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
<i>CDP6 Risk Disclosure</i>	Apple does not address potential regulatory, physical or financial risks due to climate change in its most recent CDP response.
<i>Public Policy</i>	None identified.

---

## Emissions Accounting

Score: 9

<i>GHG Emissions Inventory</i>	In the company's recently released <i>Facilities Report 2008 Environmental Update</i> , Apple reports GHG emissions for its facilities in US tons CO <sub>2</sub> e per employee for 2005-2007. Emissions data is based on natural gas and electricity consumed at Apple-owned and leased facilities worldwide. In 2007, this figure was approximately 7.5 US tons CO <sub>2</sub> e per employee. In addition,
--------------------------------	---

the company reports that in 2007 total emissions for air travel, US automobile fleet, and employee commuting were 166,000 US tons CO<sub>2</sub>e.

For its products, in 2008 Apple reported the estimated lifecycle GHG emissions for each of its major product lines. For example, the MacBook is estimated to produce 460 kg CO<sub>2</sub>e, with 50 percent of this total due to production, 39 percent due to customer use, 10 percent due to transport and less than 1 percent due to recycling. Emissions are calculated in accordance with ISO 14040 and ISO 14044 guidelines, and end user power consumption assumes a four year period with geographic differences in the power grid mix accounted for at a continental level.

*External Verification* None identified.

*Certified CO<sub>2</sub> Offsets* None identified.

## Strategic Planning

**Score: 11**

*Emissions Reduction Targets* None identified.

*Energy Efficiency* Apple's energy efficiency programs include lighting retrofits and heating and cooling system upgrades. Lighting changes and motion sensors have resulted in annual savings of over 2 million kWh of electricity since 2006. While total energy consumption grew approximately 18 percent in 2007, Apple's business grew 26 percent in that same period. Apple emissions were reduced by 3 percent year over year from 2006 to 2007. Apple also says it has implemented a number of programs at its Cork, Ireland manufacturing facility to reduce the environmental impact of operations, including a program encouraging employees to conserve electricity.

In addition, Apple has established commuter transit programs for each facility to minimize environmental impact. The Apple U.S. Commute Alternative program provides incentives for using public transportation and reducing single occupancy vehicles. Apple estimates that these programs have taken the equivalent of 4,500 cars off the road, which equates to 118,000 pounds less CO<sub>2</sub>e emissions every business day.

*Renewable Energy* Apple is a member of the World Resources Institute California Green Power Group, a partnership of fifteen of California's most prominent energy buyers to share best practices for purchasing and developing new sources of renewable energy. At its Austin site, Apple has participated for over 10 years in the city's "GreenChoice" Power Program that promotes renewable energy technology development. It reports it has cut carbon emissions at this site from electricity generation by 5,000 tons annually. In 2007, Apple also introduced a renewable energy program to its manufacturing site in Cork, Ireland that plans to convert 100 percent of the site's annual energy consumption to local renewable sources in 2008.

*Emissions Trading* Apple does not engage in emissions trading at this time.

*Products & Services* Apple addresses the environmental impact of its products by setting design related goals and internal specifications on system performance and energy efficiency. Since 2001, all Apple desktop computers, portable computers and displays have earned the ENERGY STAR rating and Apple was a founding member of the ENERGY STAR program. Apple has also participated in EPEAT, a product environmental assessment tool, since its launch in June

2006, and aims to meet or exceed standards set by the California Energy Commission, the US Federal Energy Management Program, and the EU Code of Conduct on Efficiency for External Power Supplies.

Since 2006 all Macs have shipped as standard with an 80 percent efficient power supply, while notebooks, displays and the Mac mini meet 85 percent efficiency levels. In 2006, Apple integrated Intel's energy efficient chipsets into iMac products. The company has also created an Energy Saver feature in Mac OS X, which allows customers to manage the power consumption of their computers. Other achievements include:

- The MacBook family is designed to be energy efficient. For example, the 15-inch MacBook Pro consumes only 18W in idle with the display on, less than a third of a typical household 60W light bulb, exceeding Energy Star requirements.
- The Mac mini consumes 25 Watts when on, less than half the power consumed by a typical light bulb, making it one of the most power-efficient desktop computers in the world.
- Energy efficient LED display technology now ships with several MacBooks using 30 percent less power compared to conventional CCFL-backlit displays.
- In the workstation category, Apple was the first in the industry to be able to register to the stricter Energy Star 4.0 standard in 2007.
- Finally, since 1998, Apple has cut the off-mode power consumption of power adapters used with its portable computers by 82 percent in a no-load situation.

#### *Research & Development*

None identified.

#### *Supply Chain Management*

While Apple has a robust supplier auditing and training program in place, it does not specifically address GHG emission impacts. The company's Supplier Code of Conduct includes a policy that "suppliers must endeavor to reduce or eliminate waste of all types, including water and energy, by implementing appropriate conservation measures in its facilities."

Meanwhile, Apple's design targets have delivered significant savings in material use so that compact and lightweight products reduce emissions associated with shipping. For example, the current generation 20-inch iMac is 50 percent lighter than the first generation 15-inch iMac; its packaging is 54 percent lighter and takes up 56 percent less volume. The MacBook Air is one of the lightest and most material-efficient notebooks ever made, and Apple has also estimated its lifecycle GHG emissions.

# MARRIOTT INTERNATIONAL, INC.

NEW YORK STOCK EXCHANGE – MAR  
Travel & Leisure

Marriott, in partnership with Conservation International, has become the first major global hotel company to calculate its carbon footprint and launch an integrated environmental strategy to address climate change. The plan includes specific new steps the company can take in five key areas: water, waste and energy; supply chain; green buildings; carbon offsets; and employee and guest engagement.

**Summary Score: 53**

## Company Information

Marriott International has more than 3,000 operated or franchised lodging properties in more than 65 countries. Marriott's hotel brands include Renaissance Hotels and its flagship Marriott Hotels & Resorts, Courtyard and Fairfield Inn, the Ritz-Carlton luxury chain and resort and time-share properties operated by Marriott Vacation Club International. Marriott additionally provides more than 2,000 rental units for corporate housing and manages 45 golf courses. As of year-end 2007, the company had approximately 151,000 employees.

### Contact Information

**Chairman/CEO:** J.W. Marriott, Jr.

**Website:** [www.marriott.com](http://www.marriott.com)

**Address:** 10400 Fernwood Rd., Bethesda, MD 20817, United States

## Board Oversight

**Score: 3**

### Board Committee/Member

None identified.

### Board Role

Marriott's five-point environmental strategy and long-term goals announced in April 2008 were presented to and approved by the Board of Directors in February 2008.

### Board Training

None identified.

## Management Execution

**Score: 10**

### CEO Leadership

In his letter to shareholders in the company's 2007 Annual Report, Chairman and CEO Bill Marriott states, "Sustainability means being a good corporate citizen and environmental steward, and promoting economic growth, diversity and inclusion in our communities worldwide." Marriott speaks regularly about his and the company's commitment to environmental issues and has blogged about climate change initiatives on the company's website.

### Company Strategy

Marriott unveiled a new five-point environmental strategy and long-term goals in April 2008. Building on the company's more than 20-years of resource conservation efforts, Marriott is now focusing on further reducing the company's water, waste and energy consumption; greening its supply chain; building greener hotels; helping to address climate change through avoided deforestation of the Amazon Rainforest and engaging its employees and customers in environmental efforts. The strategy was developed in collaboration with Conservation International.

### Executive Responsibility

Environmental and climate change issues are the responsibility of the company's Green Council, an enterprise-wide senior level council, chaired by Arne Sorenson, Executive Vice

# MARRIOTT INTERNATIONAL, INC.

President, CFO and President – Continental European Lodging; Ed Fuller, President and Managing Director, Marriott Lodging – International, and Kathleen Matthews, Executive Vice President, Global Communications and Public Affairs. In addition, Marriott’s Business Continuity department assesses how the company is addressing risk relative to climate change.

*External Initiatives* In April 2008, Marriott made a \$2 million commitment with the State of Amazonas in Brazil and the Amazonas Sustainable Foundation to protect 1.4 million acres of endangered rainforest and generate carbon offsets through the project. This commitment is part of a larger partnership with Conservation International, which helped the company develop its five-point environmental strategy. In addition, Marriott helped support the publication of the “Sustainable Hotel Siting, Design and Construction Guide”, a joint initiative between Conservation International and the Prince of Wales International Business Leaders Forum’s Tourism Partnership. The company is currently participating in the International Tourism Partnership’s Environmental Bench program to help establish best practices and measure results.

*Employee Training* Marriott recently held its second annual Green Fair with representatives from departments driving the company’s environmental initiatives and external vendors sharing green products and information at its headquarters in Bethesda, Maryland. News of the company’s latest green products, services and programs are shared with employees worldwide through internal communications and videos.

*Executive Compensation* None identified.

---

## Public Disclosure

**Score: 7**

*Annual Report* Marriott’s 2007 Annual Report states in a “Sustaining our Progress” section: “In partnership with Conservation International, Marriott is ramping up its efforts to integrate environmental and sustainable practices into its business in 2008 in four key areas: supply chain; green buildings; waste, water and energy; and employee and guest engagement. This strategy builds on the company’s established plans to get greener, including an effort to reduce greenhouse gases by nearly 415,000 metric tons by 2010.” The report also highlights the Sanya Marriott Resort & Spa, on China’s Hainan Island, which has installed solar panels and a “gray water” tank to conserve water use.

*Securities Filings* No climate change mention.

*Other Disclosure* Marriott has a “Green Marriott” section on its website that provides information on the company efforts in water, waste and energy reduction; forest protection; greening its supply chain and buildings; and employee and guest engagement on environmental issues.

**Sustainability Report:** *Social Responsibility Report 2007*, September 2008

**URL:** <http://www.marriott.com/socialresponsibility>

**GRI Accordance:** None identified.

*Carbon Disclosure Project* Answered Questionnaire (Public)

# MARRIOTT INTERNATIONAL, INC.

**CDP6 Risk Disclosure** Marriott recognizes that governments are increasingly setting green building regulations and emissions standards that may apply to the company's properties. In addition, the company says that its properties could be affected by rising sea levels or the occurrence of natural disasters, as well as rising costs of energy. Despite standard insurance coverage, Marriott states, "Market forces beyond our control may nonetheless limit the scope of insurance coverage at reasonable rates."

**Public Policy** Marriott says it has shared the company's environmental strategy with local, state and federal legislators, including several members of the U.S. House Representatives. The company does not specify if it supports specific climate change regulatory frameworks.

## Emissions Accounting

Score: 12

GHG Emissions Inventory Year: 2007 Facility/Region: Global Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	532,864
Scope 2 (Indirect –Electricity)	2,450,014
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

**Accounting Methods** Marriott provided energy consumption and source data for managed properties worldwide to Conservation International, which completed the calculation of its GHG emissions. The inventory includes electricity and gas consumption at nearly 1,000 managed hotels worldwide, its headquarters building and regional offices, as well as employee travel.

**External Verification** ICF audited Marriott's emissions inventory calculation and determined it to be a credible baseline for the company. ICF also made recommendations for future improvements to the inventory.

**Certified CO<sub>2</sub> Offsets** See Products & Services.

## Strategic Planning

Score: 21

Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
GHG Emissions (Absolute)	1 million tons	2000	2010	Company's carbon footprint
Energy Use	25% per available room	2007	2017	Fuel consumption
Renewable Energy	40 hotels	—	2017	Install solar power at up to 40 hotels



# MARRIOTT INTERNATIONAL, INC.

*Target Details* As part of the company's commitment to joining the US EPA Climate Leaders program in 2005, Marriott established a goal to reduce GHG emissions by 40,000 tons annually. In 2007, Marriott updated this goal to reflect the 2010 target. The company has also set various energy use and renewable energy goals for certain properties.

*Target Achievement* Marriott says that its energy efficiency programs have cut CO<sub>2</sub> emissions by nearly 4 million pounds.

*Energy Efficiency* In 2004, Marriott was selected by the Alliance to Save Energy to receive the "Star of Energy Efficiency" award. The company was also an early participant in the US EPA Climate Leaders program and was named an EPA ENERGY STAR Partner of the Year in 2005 and 2006. In 2007, Marriott received the ENERGY STAR Sustained Excellence Award for continued leadership in energy efficient management practices. Marriott has the most properties with ENERGY STAR certification in the hotel industry (more than 200) and plans to increase this number by 33 percent in 2008.

Marriott was also the first hospitality member of the US Green Building Council and the University of Maryland's Conference Center was the first hotel and conference center built to LEED standards. In addition, Marriott has set a goal to update its hotel design guidelines in line with the US Green Building Council's LEED standards by the end of 2009. The company expects to expand its portfolio of LEED-certified hotels across all Marriott brands and is pursuing LEED-Existing Building status for its headquarters building in Bethesda, Maryland, by the end of 2009.

The company has also been recognized by the state of California with its fifth annual "Flex Your Power" award for energy conservation efforts. In 2006, Marriott saved 4,700,000 kWh of electricity, 136,000 therms of natural gas and \$672,000. Finally, Marriott has arranged for employees on business travel to use the Hertz Green Collection—including hybrid rental vehicles with SmartWay certification from the US EPA.

*Renewable Energy* Marriott has set a goal to put solar power installations at up to 40 hotels by 2017. In June 2008, a New York City hotel managed by Marriott became the first hotel in the city to install a tri-generation plant to provide electricity, cooling and heating on-site. The high-efficiency micro-turbines are expected to reduce CO<sub>2</sub> emissions by about 1,700 tons annually.

*Emissions Trading* None identified.

*Products & Services* Marriott recognizes that consumer interest in climate change and environmental protection issues has grown and plans to leverage its efforts in these areas in customer loyalty programs.

As part of the company's commitment to preserve the Juma Sustainable Development Reserve in Amazonas, Brazil, the company will provide carbon offset opportunities to its customers. Marriott has also introduced a "green meeting" offering as well as a "Spirit to Preserve the Rainforest" group promotion in which 5 percent of the total costs of a group's guest rooms will help support the Amazonas project.

*Research & Development* None identified.

*Supply Chain Management* Marriott is engaging its top 40 vendors to supply price-neutral greener products across 12 categories of its \$10 billion supply chain. While some of the first products to be rolled out included pens from recycled plastics and environmentally-friendly towels which reduce water use, the company has not addressed the carbon footprints of its suppliers or other climate-specific issues.

# CARNIVAL CORPORATION

NEW YORK AND LONDON STOCK EXCHANGES – CCL  
Travel & Leisure

While Carnival has not made public a formal strategy to address the risks and opportunities posed by climate change, the company is working on new fuel efficiency and emissions reduction technologies for use both onboard and on shore. Individual operating lines also have varying annual fuel reduction plans in place. Finally, the company is an active participant in industry association collaborations around fuel efficiency, cleaner fuels, emissions trading for the shipping industry and other issues.

**Summary Score: 44**

## Company Information

Carnival is the world's largest cruise operator with about a dozen cruise lines and about 85 ships carrying seven million passengers. Carnival operates in North America primarily through its Princess Cruise Line, Holland America and Seabourn luxury cruise brands, as well as its flagship Carnival Cruise Lines unit. The company operates additional brand lines in Europe as well as the Cunard luxury transatlantic liners. Carnival operates as a dual-listed company with UK-based Carnival plc, forming a single enterprise under a unified executive team, and had approximately 81,200 employees as of 2007.

### Contact Information

**Chairman/CEO:** Micky Arison

**Website:** [www.carnivalcorp.com](http://www.carnivalcorp.com)

**Address:** 3655 NW 87th Ave., Miami, FL 33178-2428, United States

## Board Oversight

**Score: 4**

### Board Committee/Member

Health, Environmental, Safety & Security (HESS) Committee

### Board Role

Carnival Corporation & Carnival plc operate as a dual listed company with single corporate governance. The Health, Environmental, Safety & Security (HESS) Committee of the Boards of Directors supervises and monitors policies, programs, and compliance with HESS legal and regulatory requirements. The Vice President – Maritime Policy & Compliance makes quarterly reports to the HESS Committee concerning these issues and on a quarterly basis the HESS Committee reports to the full Board of Directors on issues raised by these quarterly reports. The Committee's charter does not specifically mention climate change.

### Board Training

None identified.

## Management Execution

**Score: 9**

### CEO Leadership

Carnival's Chairman/CEO and Vice Chairman/COO formally defined the company's environmental strategy through its Health, Environmental, Safety & Security policy statement. The statement was approved in October 2007.

### Company Strategy

Carnival's overall environmental strategy is guided by the company's Health, Environmental, Safety & Security policy. However, this policy does not specifically mention climate change-related issues. The company is investing in research and development of new fuel efficiency technologies and strategies and also participates in industry-wide initiatives to develop climate change solutions for the maritime industry.

# CARNIVAL CORPORATION

<i>Executive Responsibility</i>	Carnival's Corporate Maritime Policy & Compliance Department, headed by a Vice President, is responsible for providing an integrated approach to management of HESS matters. This includes establishing HESS Policy and standards, conducting HESS audits of Carnival's operating lines and measuring and reporting on HESS-related performance. Each Operating Line of the company also has an Environmental Management Executive responsible for implementing Environmental Management Systems and monitoring environmental performance. These executives have direct access to the Operating Line CEOs as well as the Vice President, Marine Policy & Compliance.
<i>External Initiatives</i>	Carnival has been a member of the Global Environmental Management Initiative (GEMI) for four years collaborating on tools and strategies to help businesses address environmental, health and safety issues. Through GEMI, Carnival representatives worked on developing a climate change business planning tool. The company is also a sponsoring member of UK-based Shipping Emissions Abatement and Trading (SEAaT), a cross-industry group whose mission is to encourage and facilitate emission reductions from shipping.
<i>Employee Training</i>	Carnival has established a Corporate Environmental Awareness and Training Standard. All shipboard and applicable shoreside personnel receive general environmental awareness training, while some employees receive job-specific environmental training. In addition, Carnival is developing shipboard educational programs for both guests and crew on energy conservation.
<i>Executive Compensation</i>	During FY 2007, Carnival offered incentives related to environmental performance, including fuel consumption reduction, to some shipboard managers.

## Public Disclosure

Score: 11

<i>Annual Report</i>	In CEO Micky Arison's letter to shareholders in the 2007 Annual Report he mentions deploying the first prototype exhaust gas scrubber system in Alaska in an effort to reduce air emissions.
<i>Securities Filings</i>	In the Risk Factors section of the company's 2007 Form 10-K, Carnival discusses current and pending climate legislation in the EU and US. The company states, "While not all are likely to become law, this is a strong indication that additional climate change related mandates will be forthcoming in the future... These and other unforeseen regulatory developments have the potential to affect our operations and increase our environmental compliance costs."
<i>Other Disclosure</i>	Carnival recently published its third annual Environmental Management Report for FY 2007. The report includes a section on environmental performance, with performance data primarily focused on ship operations and including a discussion of greenhouse gas (GHG) emissions.

**Sustainability Report:** *Fiscal Year 2007 Environmental Management Report*, April 2008

**URL:** [http://media.corporate-ir.net/media\\_files/irol/14/140690/Environmental\\_Management\\_Report\\_FY07.pdf](http://media.corporate-ir.net/media_files/irol/14/140690/Environmental_Management_Report_FY07.pdf)

**GRI Accordance:** None identified.

<i>Carbon Disclosure Project</i>	Answered Questionnaire (Public)
----------------------------------	---------------------------------

# CARNIVAL CORPORATION

**CDP6 Risk Disclosure** Carnival recognizes that various international, federal and state-level regulatory developments related to GHG emission controls could adversely impact the shipping industry through increased compliance costs. The company also says that adverse weather conditions or natural disasters could influence sales and profitability. Operating costs, including fuel, food and transportation, could also increase due to scarcity and supply chain disruptions caused by market factors related to climate change. The company has instituted a formal Enterprise Risk Management process that addresses these potential risks.

**Public Policy** Carnival participates in International Maritime Organization and EU climate policy discussions through its membership in Cruise Lines International Association, the European Cruise Council, the UK Chamber of Shipping and via the International Chamber of Shipping. The company has also taken a leadership role in developing shore power for cruise ships at US ports and participates in a working group that is establishing international standards for shore power. Carnival has also participated in various industry seminars related to carbon trading, greater fuel efficiency and use of cleaner fuels in cruise ships.

## Emissions Accounting

Score: 8

GHG Emissions Inventory Year: 2007 Facility/Region: Global Protocol: GHG Protocol

Emissions	CO <sub>2</sub> e (Metric Tonnes)
Scope 1 (Direct)	9,858,164
Scope 2 (Indirect –Electricity)	82,106*
Scope 3	—
Travel	—
Logistics	—
Products	—
Supply Chain	—

\* Electricity purchased for shipboard operations is 100 percent renewable so no emissions are allocated to this purchased electricity. Shoreside Scope 2 emissions are estimated for owned and leased facilities.

**Accounting Methods** Scope 1 emissions were calculated for shipboard operations and estimated for shoreside operations. CO<sub>2</sub> emissions were calculated using conversion factors published by the UK National Air Emissions Inventory, UK Greenhouse Gas Inventory, Digest of UK Energy Statistics DTI 1998, and Greenhouse Gas Inventory Reference Manual IPCC 1996. Global Warming Potential factors were also used to calculate CO<sub>2</sub>e amounts for HFCs, methane and nitrous oxide.

**External Verification** Currently, Carnival does not externally verify emissions data; however, the company plans to have the information externally verified or audited in the future.

**Certified CO<sub>2</sub> Offsets** None identified.

# CARNIVAL CORPORATION

## Strategic Planning

Score: 12

### Emissions Reduction Targets

	Target	Baseline Year	Target Year	Region
Energy Use	See below	—	—	By operating lines

#### Target Details

Carnival subsidiary lines have established fuel reduction plans ranging from 0.25 to 2.5 percent based on the previous year's normalized performance figures and budgets. These plans are part of their ISO 14001 Environmental Management System objectives.

#### Target Achievement

From 2005 to 2007, Carnival overall achieved a 4.4 percent reduction in fuel consumption. The company lowered its CO<sub>2</sub> emission intensity by 2.5 percent between FY2005 and FY2006 and by 2 percent between FY2006 and FY2007, both in terms of Kg CO<sub>2</sub> / ALB-km. ALB is "Available Lower Berth," a commonly referenced cruise industry indicator used to normalize data by passenger capacity.

#### Energy Efficiency

Carnival invests in fuel efficiency and other climate change-related projects through training, research and installation of new technologies. Some technologies implemented or being considered include vessel shore power installations, marine coating technology to reduce ships' drag and fuel consumption, improved HVAC systems, energy efficient lighting, evaporator management utilizing waste heat to produce fresh water and optimization of diesel generators. In addition, Carnival operates the only shipboard plasma incinerator in the cruise industry. Plasma incineration technology allows a ship to burn waste very efficiently and produce reduced air emissions and ash by-products.

Carnival is also evaluating shorter routes and changes of destination ports in its itineraries to identify opportunities to reduce fuel consumption. For example, bringing forward the departure time and delaying the arrival time by half-an-hour allows a ship to cruise from one port to another at efficient speeds with lower fuel consumption, resulting in reduced GHG emissions.

#### Renewable Energy

Electricity purchased for shipboard operations is 100 percent renewable.

#### Emissions Trading

Carnival does not currently engage in emissions trading.

#### Products & Services

Carnival sees potential commercial opportunities due to climate change in higher demand to visit environmentally protected remote areas being impacted by climate change, such as the Antarctic and Alaska, as well as the possibility to participate in carbon offset programs. The company also believes that as it improves onboard environmental practices there is an opportunity to attract customers concerned about climate change.

#### Research & Development

Carnival is continually researching, pilot testing and evaluating emerging technologies related to fuel efficiency, shipbuilding design and other areas.

#### Supply Chain Management

None identified.

# STARWOOD HOTELS & RESORTS WORLDWIDE, INC.

NEW YORK STOCK EXCHANGE – HOT  
Travel & Leisure

Starwood has established a public policy on environmental sustainability and is implementing green building practices that address climate change issues. Of particular note is the company's recent launch of a new hotel brand, ELEMENT, which has committed all properties to achieving LEED certification from the US Green Building Council. Starwood will study best practices achieved at the ELEMENT hotels to expand to the rest of its properties as well.

**Summary Score: 18**

## Company Information

Starwood Hotels & Resorts Worldwide is one of the world's largest hotel and leisure companies, with nearly 900 properties in some 100 countries. Its hotels consist of luxury brands such as Four Points, Sheraton, Westin, St. Regis, The Luxury Collection and W Hotels. Some 400 of the company's hotels are owned and operated by franchisees; the company owns or leases about 75 locations. As of the end of 2007, the company had approximately 155,000 employees.

### Contact Information

**Chairman:** Bruce W. Duncan

**CEO:** Frits van Paasschen

**Website:** [www.starwoodhotels.com](http://www.starwoodhotels.com)

**Address:** 1111 Westchester Ave. White Plains, NY 10604, United States

## Board Oversight

**Score: 0**

### Board Committee/Member

None identified.

### Board Role

Starwood says on its website that it will issue an annual environmental sustainability report to its Board of Directors.

### Board Training

None identified.

## Management Execution

**Score: 7**

### CEO Leadership

In an April 2008 press release announcing the company's ELEMENT brand commitment to LEED certification, CEO Frits van Paasschen said, "With the launch of ELEMENT, we're creating a new way to build hotels and guest experiences through the lens of environmental responsibility. By testing and refining ELEMENT in our own laboratory, we are developing an economically responsible LEED-certified hotel concept that is accessible to developers and designed to be replicated, promising a more sustainable future."

### Company Strategy

Starwood has established a public policy on environmental sustainability to facilitate company-wide alignment around green program goals. Through collaboration with hotel owners, franchisees, suppliers and business partners, Starwood says it will actively work to reduce its environmental impact by conserving natural resources, minimizing waste and pollution, enhancing indoor environmental quality, establishing and reporting on key environmental performance indicators and raising environmental awareness among the company's associates, guests and communities. Starwood's green initiatives will target existing builds, new builds and property conversions as well as address the corporate procurement strategy.



# STARWOOD HOTELS & RESORTS WORLDWIDE, INC.

<i>Executive Responsibility</i>	Starwood is currently building a staff infrastructure to support the development and execution of green initiatives. With executive leadership, the company is centralizing efforts and seeking guidance from environmental sustainability experts to develop a database of leading practices in environmental stewardship for its hotel portfolio.
<i>External Initiatives</i>	<p>Starwood is a member of US Green Building Council and, through its commitment to LEED certification with its ELEMENT brand, has become a recognized USGBC Portfolio Program Partner. This is a leadership program for owners, tenants and managers in the green building movement who seek to integrate green building into their standard business practices.</p> <p>In addition, in the UK Starwood is part of the Hospitality Energy Consortium, a group of hotel companies who partner in energy procurement. In 2005, Starwood and the Consortium joined with the Carbon Trust to study energy consumption and carbon footprint management.</p>
<i>Employee Training</i>	Starwood is building internal expertise on environmental issues through staff training on opportunities for greater environmental stewardship and a dedicated internal website. An energy conservation toolkit and training program has been distributed to every Starwood hotel in Europe, Africa and the Middle East. The company's Architecture and Design team has also participated in workshops on the US Green Building Council's LEED certification program.
<i>Executive Compensation</i>	None identified.

---

## Public Disclosure

Score: 1

<i>Annual Report</i>	No climate change mention.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	Starwood does not publish a separate sustainability report. The company's website includes a Social Responsibility section that addresses climate change-related issues and makes public the company's Environmental Sustainability Policy Statement.
<i>Carbon Disclosure Project</i>	Answered Questionnaire (Not Public)
<i>Public Policy</i>	None identified.

---

## Emissions Accounting

Score: 0

<i>GHG Emissions Inventory</i>	Starwood says it will begin publicly disclosing its carbon footprint this year through participation in the Carbon Disclosure Project.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

---



# STARWOOD HOTELS & RESORTS WORLDWIDE, INC.

## Strategic Planning

Score: 10

<i>Emissions Reduction Targets</i>	None identified.
<i>Energy Efficiency</i>	<p>In April 2008, Starwood announced its first LEED-mandated brand, ELEMENT, which will include several energy efficiency features. In addition to all ELEMENT hotels, Starwood has a number of other new build projects in pursuit of LEED certification. The company is in the process of revisiting standards and incorporating environmental sustainability into core business practices. Starwood standards will be influenced by recognized certifications such as LEED, Green Seal and Canada's Green Key as well as proven practices from the field.</p> <p>In addition, Starwood utilizes the Six Sigma methodology for a number of energy efficiency improvement projects. Starwood recently launched an initiative within North America to replace guest room incandescent lights with compact florescent lamps within all Westin, Four Points and Sheraton properties. A number of properties also utilize occupancy sensors and/or key card control systems to conserve energy. Starwood has installed 11 fuel cell power plants in 5 properties across North America. Sheraton San Diego Marina has one of the largest commercial fuel cell installations in the world. Fuel cell power plant technology runs off of natural gas and efficiently provides electricity and thermal energy to properties while generating near zero carbon emissions.</p> <p>Finally, Starwood hotels often offer shuttle services to guests and the company will be exploring the use of fuel efficient shuttles for this purpose.</p>
<i>Renewable Energy</i>	The ELEMENT hotels will also purchase wind power to offset 70 percent of electricity use for the first two years of operation as part of their LEED certification.
<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	<p>Starwood has begun to address growing consumer interest in environmental issues by launching its ELEMENT brand of hotels, its first LEED-mandated brand. More than 20 ELEMENT hotels are scheduled to open by the end of 2009 and this will be the first major hotel brand to commit to LEED certification. While the hotels will incorporate many energy efficiency elements, one unique feature is that guests driving hybrid cars will be rewarded with priority parking. Guests and staff also have access to bicycles.</p> <p>The company is also in the process of establishing its first Green Meetings program inclusive of a carbon offsetting option for corporate clients and meeting planners. The company has partnered with Sustainable Travel International in the development of a carbon offset program to offer guests and meeting planners.</p>
<i>Research &amp; Development</i>	The new ELEMENT brand designated its first hotel in Lexington, Massachusetts as a working laboratory to test green construction, products, design and operations. Using these findings, the ELEMENT brand has created a road map for developers regarding cost-effective green building and the certification process. Starwood's research indicates that LEED certification is achievable at a minimal cost premium with initial investment payback within a few years, given associated operational savings.
<i>Supply Chain Management</i>	None identified.

# MGM MIRAGE

NEW YORK STOCK EXCHANGE – MGM  
Travel & Leisure

While MGM MIRAGE is currently formalizing its strategy to address the risks and opportunities posed by climate change, the company has pursued green building and energy efficiency initiatives at various properties, most notably at the CityCenter complex set to open in late 2009 in Las Vegas, Nevada.

**Summary Score: 14**

## Company Information

MGM MIRAGE is one of the world's largest development companies with significant holdings in gaming, hospitality and entertainment. The company owns and operates 17 properties located in Nevada, Mississippi and Michigan, and has 50 percent investments in four other properties in Nevada, New Jersey, Illinois and Macau. MGM MIRAGE also has new casinos and resorts under development in Las Vegas, Atlantic City, China and Abu Dhabi. In 2005, the company acquired Mandalay Resort Group and today has approximately 67,000 employees.

## Contact Information

**Chairman/CEO:** J. Terrence Lanni

**Website:** [www.mgmmirage.com](http://www.mgmmirage.com)

**Address:** 3600 Las Vegas Blvd. South, Las Vegas, NV 89109, United States

## Board Oversight

**Score: 0**

<i>Board Committee/Member</i>	None identified.
<i>Board Role</i>	MGM MIRAGE says that its Energy and Environmental Services division is ultimately subject to the oversight of the Board's Corporate Audit Committee. As future sustainability efforts are implemented, performance assurance and audit measures will be determined.
<i>Board Training</i>	None identified.

## Management Execution

**Score: 7**

<i>CEO Leadership</i>	Chairman and CEO J. Terrence Lanni mentions sustainability and energy efficiency efforts in his letter to shareholders in the company's 2007 Annual Report. President and COO Jim Murren also spoke at an August 2008 National Clean Energy Summit held at the University of Nevada. He outlined various energy efficiency initiatives at the company.
<i>Company Strategy</i>	MGM MIRAGE's approach to sustainability has been to identify the environmental impacts of its operations, implement strategic plans for sustainability at the property and corporate levels and measure and report the outcomes of its efforts. This strategy is focused on five core areas including natural resource conservation, design and construction, procurement, waste management and education and communication. The company has not made public a climate change-specific strategy.
<i>Executive Responsibility</i>	MGM MIRAGE created an Energy and Environmental Services division, headed by a Senior Vice President, in early 2006. While some division employees are working specifically on LEED certification for the company's major new development in Las Vegas, CityCenter, others are

# MGM MIRAGE

looking at overall environmental performance of the company's ten other properties in Las Vegas. Cindy Ortega is Vice President of Energy and Environmental Services.

*External Initiatives* None identified.

*Employee Training* MGM MIRAGE has provided sustainability training for all construction workers, designers and consultants on its CityCenter project as well as training on LEED requirements for all Crystals retail tenants. In addition, the company has offered Strategic Plan for Sustainability workshops for executives of each of its Las Vegas properties. Individual properties have also formed "green teams" to develop and implement sustainability plans. For the company's CityCenter project, new hire orientation includes a sustainability training module.

*Executive Compensation* None identified.

---

## Public Disclosure

**Score: 2**

*Annual Report* In his letter to shareholders in the 2007 Annual Report, Chairman and CEO J. Terrence Lanni writes, "MGM MIRAGE continues to develop and expand our commitment to sustainability which brings tremendous value to communities and shareholders alike...CityCenter leads the way, as a nationally renowned sustainable development on course for certification under Leadership in Energy and Environmental Design (LEED) standards. Efforts are also being investigated and implemented in many other aspects of our many operations— from procurement to waste management, from construction to renovation—the principles of sustainability help our business grow and our planet thrive."

*Securities Filings* No climate change mention.

*Other Disclosure* MGM MIRAGE does not publish a separate sustainability report or include relevant information on its website.

*Carbon Disclosure Project* Declined to participate.

*Public Policy* None identified.

---

## Emissions Accounting

**Score: 0**

*GHG Emissions Inventory* In late 2007, MGM MIRAGE engaged a third party to help the company conduct a GHG emissions inventory. Results of this engagement are not yet completed.

*Certified CO<sub>2</sub> Offsets* None identified.

---

## Strategic Planning

**Score: 5**

*Emissions Reduction Targets* None identified.

*Energy Efficiency* Since 2006, MGM MIRAGE Las Vegas properties have implemented technologies and practices that reduced annual electricity consumption by nearly 50 million kWh. In 2008, the company also implemented upgrades to natural gas burning equipment that will reduce energy consumption by nearly 46,000 MMBtu.

## MGM MIRAGE

The company's largest sustainability project is a joint venture with Dubai World to open CityCenter, a 67-acre hotel and residential complex on the Las Vegas Strip in late 2009. The company is pursuing the US Green Building Council's LEED certification and aiming to make the 18-million-square foot, multi-use project one of the world's largest environmentally sustainable urban communities. Planned features in the hotel rooms include:

- Energy efficient lighting with a planned 50 percent improvement over code requirements for guestrooms in the ARIA Hotel Tower and Vdara.
- Green settings on the room's remote system to allow guests the opportunity to voluntarily "green their stay" by indicating their preferred light level, room temperature and frequency of linen and towel changes.
- Programmable systems to automatically put a room into unoccupied status upon checkout turning down or off the heating/cooling system, televisions, lights and any appliances.

In addition, Siemens has contracted to build a \$100 million on-site power plant and to help provide the site with energy efficiency technologies and a water reclamation system. The project will also include green roofs and a property-wide monorail system that will connect with the company's ten other properties on the Las Vegas Strip. Overall, CityCenter is designed to achieve a more than 30 percent improvement in energy efficiency over current building codes.

### *Renewable Energy*

The CityCenter project will also include a \$13 million co-generation power plant. The combined heat and power plant will utilize excess heat for pools and hot water needs.

### *Emissions Trading*

None identified.

### *Products & Services*

MGM MIRAGE offers Green Meeting Services through its convention and group sales.

### *Research & Development*

None identified.

### *Supply Chain Management*

None identified.

# LAS VEGAS SANDS CORP.

NEW YORK STOCK EXCHANGE – LVS  
Travel & Leisure

Las Vegas Sands has not made public a formal strategy to address the risks and opportunities posed by climate change. There is no evidence of board or executive leadership with respect to climate change, and the company has not set greenhouse gas (GHG) emission reduction targets. However, the company has pursued green building and energy efficiency initiatives at various properties. The company did not comment on this profile by deadline.

**Summary Score: 7**

## Company Information

Las Vegas Sands, a hotel, gaming and resort development company, owns the Venetian Resort Hotel Casino and the Palazzo Resort Hotel Casino, both in Las Vegas, Nevada. The company also owns attached conference and exhibition centers in Las Vegas. In Asia, the company owns the Sands Macao and The Venetian Macao Resort Hotel and is developing integrated resort properties in Macao and Singapore. As of 2007, the company had approximately 28,000 employees.

### Contact Information

**Chairman/CEO:** Sheldon Adelson

**Website:** [www.lasvegassands.com](http://www.lasvegassands.com)

**Address:** 3355 Las Vegas Blvd. South, Las Vegas, NV 89109, United States

## Board Oversight

**Score: 0**

<i>Board Committee/Member</i>	None identified.
<i>Board Role</i>	None identified.
<i>Board Training</i>	None identified.

## Management Execution

**Score: 2**

<i>CEO Leadership</i>	Chairman and CEO Sheldon Adelson accepted LEED certification for The Palazzo Las Vegas in April 2008 and stated in the press release, "From the beginning, we were determined to create Las Vegas' first truly eco-friendly property and we are extremely proud to have achieved it and be recognized for it. There is an increasing necessity to employ 'green' construction principles and we are proud to be a leader in the evolution of environmentally-focused building practices, not only on the Las Vegas Strip, but at Las Vegas Sands' properties throughout the world."
<i>Company Strategy</i>	None identified.
<i>Executive Responsibility</i>	None identified.
<i>External Initiatives</i>	None identified.
<i>Employee Training</i>	None identified.
<i>Executive Compensation</i>	None identified.

# LAS VEGAS SANDS CORP.

## Public Disclosure

Score: 0

<i>Annual Report</i>	Las Vegas Sands does not publish a separate annual report; relevant information can be found in the company's annual Form 10-K.
<i>Securities Filings</i>	No climate change mention.
<i>Other Disclosure</i>	Las Vegas Sands does not publish a separate sustainability report or include relevant information on its website.
<i>Carbon Disclosure Project</i>	No response.
<i>Public Policy</i>	None identified.

## Emissions Accounting

Score: 0

<i>GHG Emissions Inventory</i>	None identified.
<i>Certified CO<sub>2</sub> Offsets</i>	None identified.

## Strategic Planning

Score: 5

<i>Emissions Reduction Targets</i>	None identified.
<i>Energy Efficiency</i>	<p>In April 2008, The Palazzo Las Vegas was awarded a Silver LEED certification by the U.S. Green Building Council and named the largest LEED-certified building in the world. The US Department of Energy also presented The Palazzo with "The Energy Innovator's Award" which recognizes businesses that have successfully developed or deployed energy efficiency or renewable energy technologies or policies. The Palazzo's energy efficiency and conservation efforts include:</p> <ul style="list-style-type: none"><li>■ Artificial turf, drip irrigation and moisture sensors in planted areas result in over a 75 percent reduction in irrigation needs.</li><li>■ Air conditioning controls in guest suites that automatically setback by several degrees when guests are not present and reset to the desired temperature upon return.</li><li>■ Team member service areas equipped with lighting occupancy sensors that shut off lights when no one is in the area.</li><li>■ Interior plumbing fixtures that use 37% less water than conventional buildings as a result of water-efficient showerheads, high efficiency toilets and low-flow lavatory faucet aerators.</li></ul>
<i>Renewable Energy</i>	Swimming pools at The Palazzo are heated with an expansive solar pool heating system. In the summer, the excess solar energy not needed for the pools is directed to the hotel's hot water system, reducing the need to heat water for guest suites.
<i>Emissions Trading</i>	None identified.
<i>Products &amp; Services</i>	None identified.
<i>Research &amp; Development</i>	None identified.
<i>Supply Chain Management</i>	None identified.