How Consumer and Technology Companies are Addressing Climate Risk

RiskMetrics Group
Climate Risk Management

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Corporate Governance and Climate Change

Consumer and Technology Companies

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A Ceres Report

Ceres

RiskMetrics Group

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New Sectors in the Spotlight

- Changing economic and political landscape – climate change critical issue across sectors. Focus is no longer solely on heavy-emitting industries.
- Report examines 63 of the world's largest companies across 11 industry sectors: apparel, beverages, big box retailers, grocery & drug retailers, personal and household goods, pharmaceuticals, real estate, restaurants, semiconductors, technology, and travel & leisure.

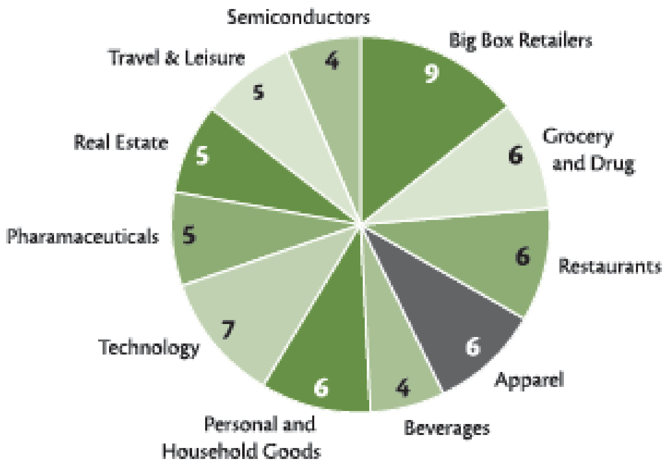

Exhibit 1: Sector Breakdown of Companies

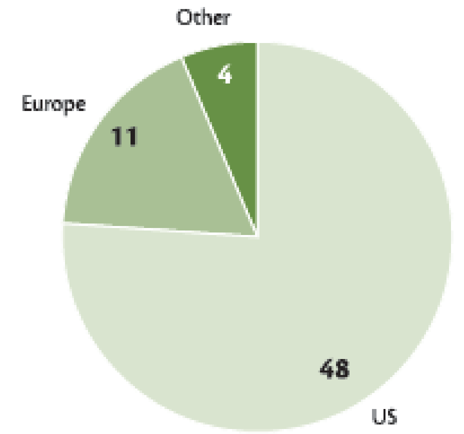

Exhibit 2: Regional Breakdown of Companies

New Sectors in the Spotlight

Diverse set of companies and industries with unique climate challenges – but several key areas of risk and opportunity:

- **Operations**
  - Major energy consumers – energy conservation and efficiency is key
- **Products – Design and Promotion**
  - Growing demand for energy efficient and other climate-friendly products
- **Supply Chain**
  - Often largest component of carbon footprint
  - Upstream and downstream opportunities – lifecycle analysis is key

How Companies are Scored

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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 Opportunities	
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 set an emissions baseline by which to gauge future GHG emissions trends.	
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.	

How Companies are Scored

To acknowledge different sector impacts and opportunities, the weights for three of the five themes in the Strategic Opportunities section – energy efficiency, products and services, and supply chain management – vary by sector.

Industry Sector	Key Climate Change Considerations	Energy Efficiency	Products & Services	Supply Chain Management
		Checkmarks Indicate Emphasis for Variable Section Scores		
Apparel	• Energy efficiency of stores • Raw material production/sourcing	✔		✓
Beverages	• Energy efficiency of manufacturing • Agricultural disruptions • Water supply and quality	✔		✓
Big Box Retailers	• Energy efficiency of stores • Transport and logistics costs • Carbon labeling of products	✔	✓	✔
Grocery & Drug Retailers	• Energy efficiency of stores • Transport and logistics costs • Carbon labeling of products	✔	✓	✔
Personal & Household Goods	• Energy efficiency of manufacturing • Raw material sourcing • Demand for climate-friendly products	✔	✓	✔
Pharmaceuticals	• Energy efficiency of manufacturing • Product distribution	✔		✓
Real Estate	• Building portfolio energy efficiency		✔	
Restaurants	• Energy efficiency of buildings • Supply chain management	✔		✓
Semiconductors	• PFC emissions in manufacturing • Water supply and quality • Demand for new products – solar cells	✓	✔	
Technology	• Energy efficiency of products • Energy efficiency of manufacturing/offices	✓	✔	
Travel & Leisure	• Energy efficiency of hotels/cruise ships • Supply chain management • Changing customer preferences	✔		✓

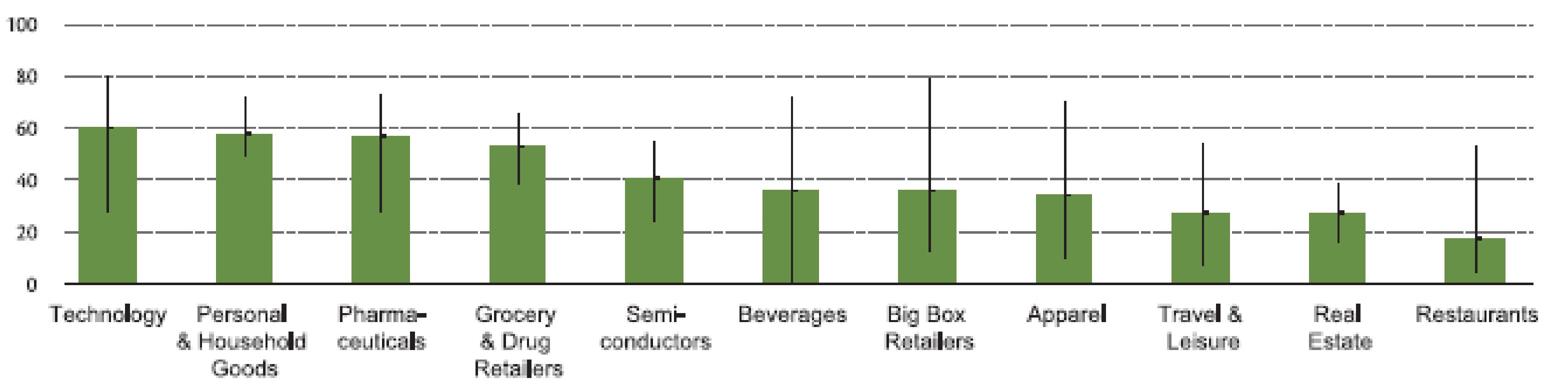
Scoring results

- **Technology, semiconductors** and **pharmaceuticals** were highest-scoring sectors. Technology and semiconductors strong in product innovation, pharmaceuticals leading in climate change governance.

- **Beverages** and **personal & household goods** sectors relatively strong, given limited capacity for climate-friendly product development.

- The **apparel** sector, **grocery & drug retailer** and **big box retailers** – all with large real estate carbon footprints – had lower average scores. But within each sector one or two companies stand out with respect to energy efficiency, product promotion, and supply chain management.

- The **travel & leisure, real estate,** and **restaurant** sectors had the lowest average scores, despite their extensive real estate portfolios that present significant opportunity for energy efficiency gains.



Top Scores by Sector

ALL SECTORS
IBM (79)
Tesco (78)

Beverages
Coca-Cola (65)
Molson Coors (58)

Household & Personal Goods
L'Oreal (54)
Colgate - Palmolive (52)

Apparel
Nike, Inc. (71)
H & M (54)

Pharmaceuticals
Johnson & Johnson (71)
GlaxoSmithKline (57)

Semiconductors
Intel (72)
Applied Materials (67)

Big Box Retailers
Wal-Mart Stores (69)
Carrefour SA (52)

Real Estate
Simon Property Group (38)
CB Richard Ellis Group (37)

Technology
IBM (79)
Dell (77)

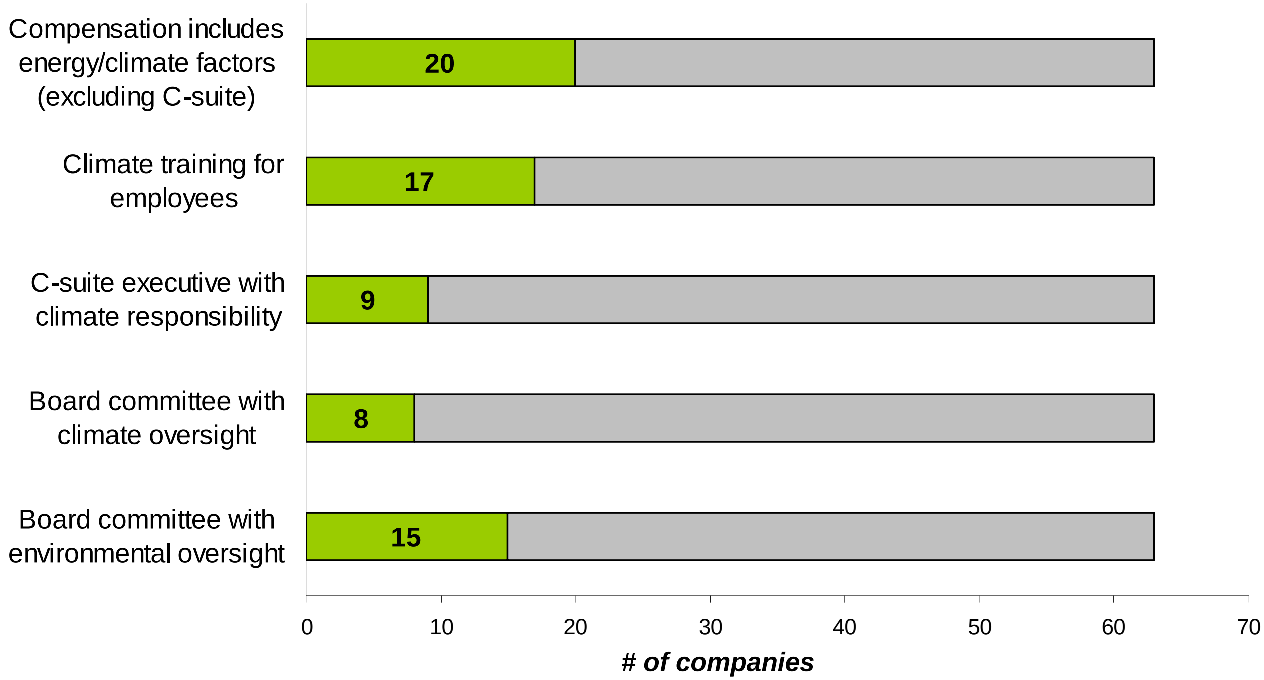
Grocery & Drug Retailers
Tesco (78)
Safeway (48)

Restaurants
Starbucks (52)
McDonald's (26)

Travel & Leisure
Marriott International (53)
Carnival (44)

Climate Change Governance

- **Board of directors and senior management involvement** in climate change strategy still infrequent, but a growing number of CEOs are taking the lead on climate change
- **Integrated management approach** to climate change strategy is now a growing trend - climate change teams cross-cut all lines of business and levels of employees
- **Public disclosure** of climate change strategies on the rise - two-thirds of companies discuss climate change in annual report and 42 of 60 companies publicly responded to CDP. Still, securities filings disclosure lags other forms of reporting and few companies discuss material risk.



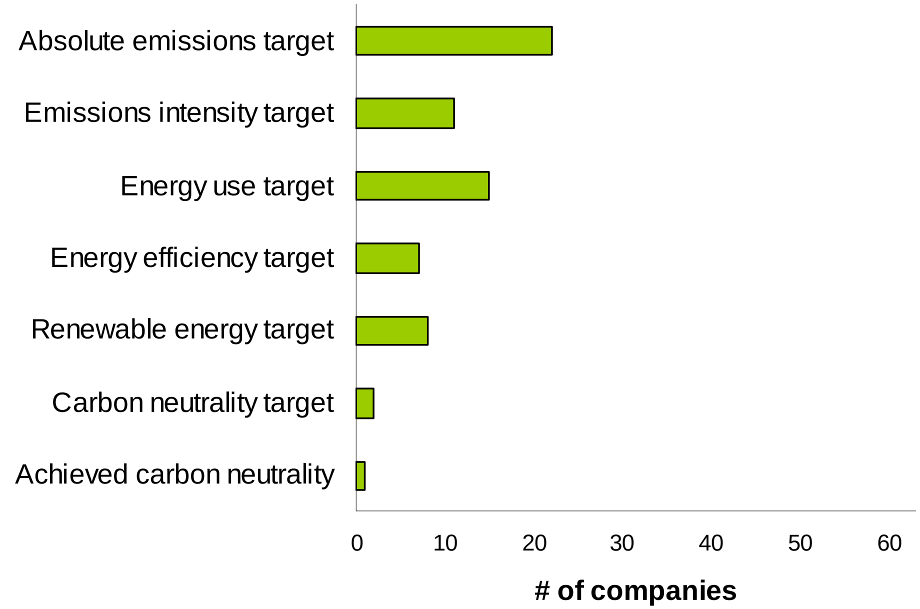
Operations

- 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.

- Companies across industries are pursuing on-site renewable energy generation, but only eight companies have set targets for renewable energy purchases.

Emissions and Energy Reduction Targets



Operations Continued

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Target Achievements

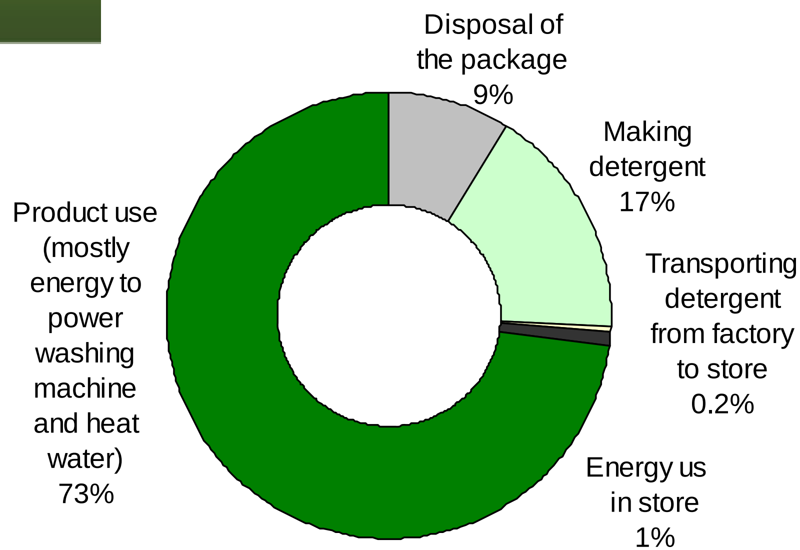
	Target	Baseline Year	Target Year	Region
Avon Products	30% energy use reduction	2000	2007 (1 year early)	Global manufacturing
Canon	12% GHG reduction per unit of net sales	2000	2007	Operational site emissions
Colgate-Palmolive	28% energy efficiency improvement	1998	2007	Global
Dell	Carbon neutral	—	2008	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	1st 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

Products - Design and Promotion

- **Technology and semiconductor companies** leading the way in product design with data center energy efficiency, video conferencing, supply chain carbon accounting, renewable energy technology, offering solar photovoltaic equipment and other products.

> Information and communications technologies will become a major source of greenhouse gas emissions but can abate far more of them.
>
> -- *McKinsey & Co., 2008*

- Several **personal and household goods** companies are taking the lead product design to reduce consumer energy use such as cold water laundry detergent and energy efficiency electric razors
- **Big box and grocery retailers** are leading the way in promotion of energy efficient products. Examples include setting targets for sales of energy efficient products, setting energy efficiency requirements for products, and carbon labeling initiatives to inform consumer decision-making.



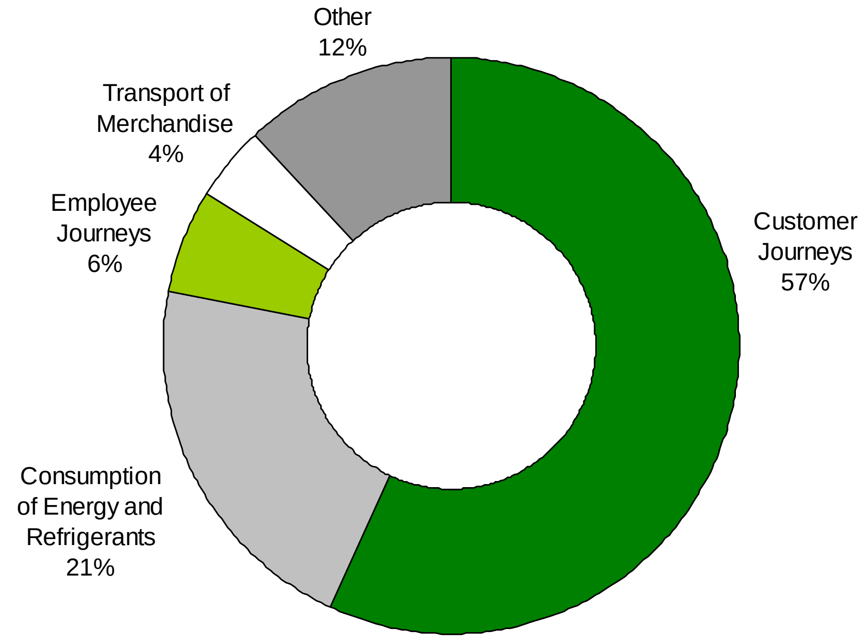
Tesco's Carbon Footprint of Laundry Detergent

Supply Chain Management

Roughly one-third of companies are taking some steps to shift toward a lower-carbon supply chain

Leading companies are:

- Using **life cycle analyses** to measure GHG emissions across the supply chain
- Re-setting **supplier standards** and other **supplier engagement** tactics to address energy efficiency and greenhouse gas emissions
- Maximizing efficiencies in **distribution** and other **logistics** processes



Carrefour's Chambourcy Hypermarket: Measuring supply chain emissions

Incorporating carbon reduction into [a company's] overall SCM strategy…can help reduce [its carbon] emissions footprint, strengthen their brand image and develop a competitive advantage…Reducing the supply chain's carbon footprint will become an escapable obligation."

-- IBM, 2008

Contact Information

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